

An Online Music Platform: “ANADI”

By

Dipra Paul
ID: 201-15-13862

FINAL YEAR DESIGN PROJECT REPORT

**This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Computer Science and Engineering**

Supervised By

Supervisor
Ms. Tanzina Afroz Rimi
Lecturer

Department of Computer Science and
Engineering Daffodil International University



DAFFODIL INTERNATIONAL UNIVERSITY

DHAKA, BANGLADESH

DECEMBER 15, 2024

APPROVAL

This Project titled “An Online Music Platform ‘Anadi’ ”, submitted by Dipra Paul, ID No: 201-15-13862 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 13 January, 2025.

BOARD OF EXAMINERS



Dr. Md. Zahid Hasan
Associate Professor
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Chairman



Mr. Saiful Islam
Assistant Professor
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Internal Examiner



Mr. Afjal Hossan Sarower
Senior Lecturer
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Internal Examiner

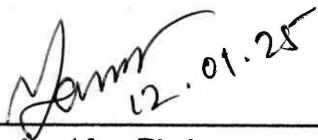
Dr. Ahmed Wasif Reza
Professor
Department of Computer Science and Engineering
East West University

External Examiner

DECLARATION

We hereby declare that this project has been done by us under the supervision of **Ms. Tanzina Afroz Rimi, Lecturer (Senior Scale)**, Department of Computer Science and Engineering, Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for the award of any degree or diploma.

Supervised by:



Ms. Tanzina Afroz Rimi

Lecturer (Senior Scale)

Department of Computer Science and Engineering

Daffodil International University

Submitted by:



Dipra Paul

Student ID: 201-15-13862

Department of Computer Science and Engineering

Daffodil International University

ACKNOWLEDGEMENTS

This work would not have been possible without the support and contributions of many individuals over the past two semesters. We are deeply grateful to everyone who has assisted us in one way or another.

First, we express our heartfelt thanks and gratefulness to the almighty for His divine blessing making it possible for us to complete the **Final Year Design Project (FYDP)** successfully.

We are grateful and wish our profound indebtedness to **Ms. Tanzina Afroz Rimi, Lecturer**, Department of Computer Science and Engineering, Daffodil International University, Dhaka, Bangladesh. Deep knowledge and keen interest of our supervisor in the field of **Web Development** to carry out this project. His endless patience, scholarly guidance, continual encouragement, constant and energetic supervision, constructive criticism, valuable advice, reading many inferior drafts, and correcting them at all stages have made it possible to complete this project.

We would like to express our heartfelt gratitude to the Head of the Department of Computer Science and Engineering, for his kind help in finishing our project and also to other faculty members and the staff of the Department of Computer Science and Engineering, Daffodil International University.

We would like to thank our entire course-mates at Daffodil International University, who took part in this discussion while completing the coursework.

Finally, we must acknowledge with due respect the constant support and patience of our parents.

ABSTRACT

ANADI is an innovative online music streaming platform dedicated to supporting independent Bangla music artists and fostering a global appreciation for Bangla music. The project addresses the challenges faced by lesser-known artists in reaching audiences by providing a user-friendly, scalable platform where they can showcase their work. ANADI bridges the gap between artists and listeners through features such as music uploads, artist management, and personalized recommendations, while promoting the cultural richness of Bangla music. Key functionalities include seamless user registration, login systems, intuitive navigation, and interactive pages like home, top lists, and search, implemented using HTML, CSS, JavaScript, PHP, and MySQL. The platform emphasizes a minimalist design, scalability, and user engagement, integrating tools like play/pause buttons, synchronized seek bars, and ranking systems. Advertisement spaces ensure monetization and sustainability. ANADI's long-term vision includes transitioning to advanced technologies such as React, Django, and Google Cloud, enhancing scalability and interactivity. The platform aims to establish itself as a digital sanctuary for Bangla music, empowering independent artists, connecting audiences, and preserving cultural heritage. Ultimately, ANADI seeks to redefine the way Bangla music is discovered and celebrated globally.

Table of Contents

Approval	i
Declaration	ii
Acknowledgements	iii
Abstract	iv
List of Figures	viii
List of Tables	ix
1 Introduction	1
1.1 Introduction.....	1
1.2 Motivation.....	1
1.3 Objectives.....	1
1.4 Methodology.....	1
1.5 Project Outcome.....	3
1.6 Organization of the Report.....	3
2 Background	4
2.1 Introduction.....	4
2.2 Literature Review.....	4
2.2.1 Similar Applications.....	5
2.2.2 Related Research.....	11
2.3 Gap Analysis.....	15
2.4 Summary.....	16
3 Research Methodology	18
3.1 Methodology/Requirement Analysis & Design Specification.....	18
3.1.1 Overview.....	18
3.1.2 Proposed Methodology/ System Design.....	18
3.1.3 Functional and Nonfunctional Requirements.....	19
3.1.4 Context Diagram.....	19

3.1.5	Data Flow Diagram Level 1.....	20
3.1.6	UI Design.....	20
3.2	Detailed Methodology and Design.....	21
3.3	Project Plan.....	26
3.4	Task Allocation.....	28
3.5	Summary.....	30
4	Implementation and Results	31
4.1	Environment Setup.....	31
4.2	Testing and Evaluation/Performance/ Comparative Analysis.....	31
4.3	Results and Discussion.....	31
4.4	Summary.....	32
5	Engineering Standards and Design Challenges	33
5.1	Compliance with the Standards.....	33
5.1.1	Software Standards.....	33
5.1.2	Hardware Standards.....	34
5.1.3	Communication Standards.....	34
5.2	Impact on Society, Environment and Sustainability.....	35
5.2.1	Impact on Life.....	35
5.2.2	Impact on Society & Environment.....	36
5.2.3	Ethical Aspects.....	36
5.2.4	Sustainability Plan.....	37
5.3	Project Management and Financial Analysis.....	38
5.4	Complex Engineering Problem.....	40
5.4.1	Complex Problem Solving.....	40
5.4.2	Engineering Activities.....	42
5.5	Summary.....	42
6	Conclusion	44
6.1	Summary.....	44
6.2	Limitation.....	44
6.3	Future Work.....	45
	References	48

List of Figures

2.1	Spotify	5
2.2	SoundCloud	6
2.3	Youtube Music	7
2.4	Deezer	7
2.5	Amazon Music	8
2.6	Apple Music	9
2.7	Tidal	9
2.8	Pandora	9
2.9	Robi/Yonder Music	10
2.10	GP Music	10
2.11	Shadhin Music	10
2.12	Bongo	11
2.13	Bioscope	11
3.1	Context Diagram	19
3.2	Data Flow Diagram (Level 1)	20
3.3	Login/Sign in Page	23
3.4	Register/Sign up Page	23
3.5	Home Page	24
3.6	Search Page	24
3.7	Top List Page	25
3.8	User Profile Page	25
3.9	Upload Page	26

List of Figures

2.1	Spotify	5
2.2	SoundCloud	6
2.3	Youtube Music	7
2.4	Deezer	7
2.5	Amazon Music	8
2.6	Apple Music	9
2.7	Tidal	9
2.8	Pandora	9
2.9	Robi/Yonder Music	10
2.10	GP Music	10
2.11	Shadhin Music	10
2.12	Bongo	11
2.13	Bioscope	11
3.1	Context Diagram	19
3.2	Data Flow Diagram (Level 1)	20
3.3	Login/Sign in Page	23
3.4	Register/Sign up Page	23
3.5	Home Page	24
3.6	Search Page	24
3.7	Top List Page	25
3.8	User Profile Page	25
3.9	Upload Page	26

List of Tables

2.1	Summary of Literature Reviewed	4
2.2	Comparative analysis with Spotify	11
2.3	Comparative analysis with Deezer	12
2.4	Comparative analysis with Soundcloud	12
2.5	Comparative analysis with YouTube Music	13
2.6	Comparative analysis with Apple Music	13
2.7	Comparative analysis with Amazon Music	14
2.8	Comparative analysis with GP Music	14
2.9	Comparative analysis with Shadhin Music	15
2.10	Gap analysis	15
5.1	Estimated Financial Costs Including Future Integration	39
5.2	Mapping with complex problem solving	40
5.3	Mapping with knowledge Profile	41
5.4	Mapping with complex engineering activities	42

Chapter 1

Introduction

Anadi is an online music platform aimed at empowering independent artists. It provides a space for emerging talents to showcase their music, primarily focusing on Bangla music, while offering streaming, album releases, and promotional opportunities for newcomers.

1.1 Introduction

ANADI is an online music platform dedicated to supporting independent Bangla music artists and connecting them with music lovers worldwide. Its mission is to promote Bangla language, music, and art by providing a stage for lesser-known artists to showcase their talent. ANADI ensures accessibility to music through fair-quality audio files submitted by artists and offers an enjoyable user experience with a clean, minimal interface.

1.2 Motivation

The core motivation behind ANADI is to empower independent Bangla artists who often struggle for recognition. Existing platforms fail to give them the spotlight they deserve, leaving a significant gap in the representation of Bangla music. ANADI addresses this by focusing on the growth of these artists, creating opportunities for healthy competition, and fostering a community-driven approach to music appreciation.

1.3 Objectives

- Build a scalable music platform that highlights and supports independent Bangla artists.
- Promote Bangla music by collecting tracks from various artists across campuses, seasons, and events.
- Provide a seamless platform for users to explore, rank, and enjoy music while fostering competition among artists.
- Continuously improve the platform by integrating modern technologies like React for frontend, Django for backend, and cloud-based databases.

1.4 Methodology

The methodology for the development of ANADI involves a systematic approach encompassing multiple phases to ensure the platform meets its objectives of supporting independent Bangla music artists and delivering a seamless user experience. The following steps outline the methodology:

1. Requirement Analysis

- Conducted interviews with independent artists to understand their needs for showcasing music.
- Surveyed potential users to gather insights on preferred features for a music

streaming platform.

- Studied existing platforms (Spotify, SoundCloud, Shadhin Music, etc.) for comparative analysis and identifying gaps in services for Bangla music.

2. System Design

- Functional Design:
 - Developed user roles (Super Admin, System User, Artist, Audience) to define platform interactions.
 - Designed use case diagrams and logical data models for clarity in system workflows.
- User Interface (UI) Design:
 - Created wireframes for homepage, search page, top list page, and other features.
 - Focused on minimalistic aesthetics and user-friendly navigation.
- Data Design:
 - Created data flow diagrams (DFD) at levels 0 and 1 to define interactions for album, music, and user management modules.

3. Development

- Front-End Development:
 - Implemented homepage, top list page, and search page using HTML, CSS, and JavaScript.
 - Integrated interactive features like play/pause buttons, seek bars, and ranking systems.
- Back-End Development:
 - Developed registration and login functionalities using PHP and MySQL for data storage and validation.
 - Designed a scalable structure for future database expansion to accommodate more artists and music.
- Scalability Considerations:
 - Built the system to be easily expandable for additional songs, users, and functionalities.

4. Testing and Debugging

- Conducted unit testing for each feature to ensure individual components function correctly.
- Performed system testing to validate integration and seamless interactions across modules.
- Addressed performance bottlenecks to optimize speed and responsiveness.

5. Implementation

- Launched a working prototype with basic functionalities like user registration, music upload, and search capabilities.
- Utilized JSON for internal music storage and developed the system to allow easy external database integration in the future.

6. Evaluation

- Collected feedback from artists and early adopters to refine the platform.
- Measured user engagement through interaction data (e.g., likes, plays) to identify areas for improvement.

7. Future Plans

- Transition front-end to React and back-end to Django for better performance and modularity.
- Migrate to Google Cloud for enhanced storage scalability.
- Incorporate advanced recommendation algorithms using APIs for a personalized user experience.

1.5 Project Outcome

- A reliable, scalable platform with a growing database of independent Bangla music.
- Increased visibility and recognition for Bangla artists on a global scale.
- An intuitive user experience featuring easy navigation, song discovery, ranking, and engagement tools.
- A strong foundation for future expansion with more features, APIs, and advanced algorithms.

1.6 Organization of the Report

The report is structured to provide a clear and concise understanding of the ANADI project, its objectives, methodology, implementation, and impact. The chapters are organized as follows:

- **Chapter 1:** Introduction: This chapter introduces the ANADI project, covering its motivation, objectives, adopted methodology, expected outcomes, and an overview of the report structure.
- **Chapter 2:** Background: This chapter provides context by reviewing similar applications, related research, and identifying gaps in existing platforms. It highlights the need for ANADI and summarizes the findings.
- **Chapter 3:** Research Methodology: This chapter outlines the system design, functional and nonfunctional requirements, data flow diagrams, UI design, and task allocation. It also presents the project plan and the approach to development.
- **Chapter 4:** Implementation and Results: This chapter describes the technical development, including environment setup, testing, performance evaluation, and results, along with a discussion on the effectiveness of the platform.
- **Chapter 5:** Engineering Standards and Challenges: This chapter addresses compliance with relevant standards, examines societal, environmental, and ethical impacts, presents a sustainability plan, and discusses complex challenges encountered during development.
- **Chapter 6:** Conclusion: The final chapter summarizes the project's achievements, discusses limitations, and outlines potential future developments.
- **References:** A list of all references used in the development of the project is provided.

This structure ensures a logical flow, enabling a focused and comprehensive understanding of the ANADI project.

Chapter 2

Background

Anadi was created to help independent musicians gain exposure. Many lesser-known artists lack platforms to showcase their work. Anadi bridges this gap by offering a space for them to upload music, get promoted, and compete, while focusing on Bangla music and global genres.

2.1 Introduction

ANADI is a platform dedicated to empowering independent Bangla music artists and promoting the rich heritage of Bangla music. It addresses the challenges faced by emerging artists in gaining visibility, offering a space to share their work directly with audiences, regardless of studio-level production quality. Unlike mainstream platforms that prioritize commercial content, ANADI focuses on showcasing diverse and authentic Bangla music, fostering a community that values cultural expression. With its scalable, user-friendly design, the platform bridges the gap between technology and tradition, aspiring to preserve and elevate Bangla music on a global stage.

2.2 Literature Review

The literature review highlights key aspects of music streaming services. Sim et al. (2022) show that bestseller lists influence discovery but limit exploration of lesser-known tracks. Freeman et al. (2022) discuss the balance between personalized algorithms and diversity. Chin et al. (2022) emphasize user satisfaction and personalized playlists for subscription retention. Valera et al. (2021) demonstrate the value of context-aware systems for group preferences. These studies stress personalization, diversity, and user focus in streaming platforms.

Table 2.1: Summary of Literature Reviewed

Author (s)	Year	Title	Methodology	Key Findings
Sim, Jaeung, et al.	2022	Bestseller Lists and Product Discovery in the Subscription-based Market: Evidence From Music Streaming	Analyzed the impact of bestseller lists on music discovery using user interaction data from streaming platforms.	Bestseller lists significantly influence consumer choices, reducing exploration of lesser-known tracks and artists.

Freeman, Sophie, et al.	2022	'Don't Mess With My Algorithm': Exploring the Relationship Between Listeners and Automated Curation and Recommendation on Music Streaming Services.	Conducted qualitative interviews with listeners to examine their perception of algorithms in music streaming.	Listeners value personalized recommendations but express concern about over-reliance on algorithms limiting discovery of diverse music.
Chin, Phaik Nie & Yeoh, Shih & J P Yuntavid, Xavier	2022	Examining the continuous usage intention and behaviours of music streaming subscribers	Surveyed streaming users and applied statistical analysis to determine factors affecting subscription retention.	User satisfaction and perceived usefulness significantly impact subscription behavior, with personalized playlists being a critical driver.
Valera, Adrián, et al.	2021	Context-Aware Music Recommender Systems for Groups: A Comparative Study.	Evaluated multiple group recommender system algorithms through experimental simulations.	Context-aware systems improve group satisfaction by balancing individual preferences and contextual factors.

2.2.1 Similar Applications

1) **Spotify:** Spotify is a widely popular digital music streaming service that provides users with access to an extensive library of songs, podcasts, and other audio content. Founded in April 2006 by Daniel Ek and Martin Lorentson in Stockholm, Sweden, Spotify has since become one of the leading platforms in the music streaming industry.

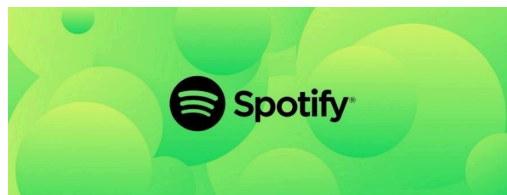


Figure 2.1: Spotify

The platform offers both free and premium subscription options. Free users can listen to music with occasional advertisements, while premium subscribers enjoy an ad-free experience, higher audio quality, and additional features such as offline listening. Spotify's vast music catalog spans various genres and includes millions of tracks from artists around the world.

Spotify utilizes a personalized recommendation algorithm that learns users' preferences based on their listening habits, creating curated playlists and suggesting new music tailored to individual tastes. Users can create and share their own playlists, follow artists, and explore a diverse range of podcasts on the platform.

Spotify has had a significant impact on the music industry by shifting the consumption of music from traditional ownership models to on-demand streaming. It has also played a role in the resurgence of the music industry's revenue, providing a legal and convenient alternative to piracy.

2) Soundcloud: SoundCloud is an online audio distribution platform that enables artists, musicians, and podcasters to upload, promote, and share their original music and audio content. Founded in 2007 by Alexander Ljung and Eric Wahlforss in Berlin, Germany, SoundCloud has grown to become a prominent platform for both emerging and established artists to showcase their work.



Figure 2.2: Soundcloud

What sets SoundCloud apart is its emphasis on user-generated content and its openness to a diverse range of genres and styles. The platform allows creators to upload their tracks, making them accessible to a global audience. Users can discover new music, follow their favorite artists, and engage with the community through likes, comments, and reposts.

SoundCloud's accessible nature has made it a breeding ground for emerging talent, as it provides a platform for artists who may not have traditional industry support to share their music with the world. It has played a crucial role in democratizing music distribution by offering a space for independent musicians to gain visibility.

In addition to music, SoundCloud has become a hub for podcasts, spoken-word content, and other audio creations. It offers a range of subscription plans, including a free tier with limited features and premium plans that provide additional benefits like ad-free listening and expanded upload capabilities.

3) YouTube Music: YouTube Music is a music streaming service developed by YouTube, a subsidiary of Google. Launched in May 2018, YouTube Music aims to provide users with a

platform for discovering, listening to, and sharing music. It complements the traditional YouTube platform, offering a more focused experience tailored specifically to music consumption.



Figure 2.3: YouTube Music

YouTube Music offers a vast library of songs, albums, and playlists, covering a wide range of genres. Users can access the service through both free and premium subscription models. The free version includes ads and limitations on background play, while the premium subscription, known as YouTube Music Premium, offers an ad-free experience, background playback, offline downloads, and additional features.

One distinctive feature of YouTube Music is its integration with the broader YouTube platform. Users can seamlessly switch between watching music videos and listening to audio-only tracks. This integration also allows for user-generated content, where artists and fans can create and share their own music videos and playlists.

Similar to other music streaming services, YouTube Music employs machine learning algorithms to provide personalized recommendations based on users' listening history, preferences, and search patterns. The platform also offers curated playlists, radio stations, and a "Discover Mix" to introduce users to new music.

4) Deezer: Deezer is a prominent music streaming service that offers a vast and diverse collection of music tracks, podcasts, and radio stations to its users. Founded in August 2007 by Daniel Marhely and Jonathan Benassaya in Paris, France, Deezer has grown into a globally recognized platform, providing both free and premium subscription options.

Similar to other music streaming services, Deezer allows users to access its extensive catalog of millions of songs, spanning various genres and languages. The platform offers personalized playlists, radio stations, and recommendations based on users' listening habits through its advanced recommendation algorithm.



Figure 2.4: Deezer

Deezer provides two main subscription tiers: a free, ad-supported option, and a premium subscription called Deezer Premium. Premium subscribers enjoy several benefits, including an ad-free experience, offline listening, and enhanced audio quality. Additionally, Deezer offers specialized plans such as Deezer Family, which allows multiple family members to have individual profiles under one subscription. One notable feature of Deezer is its focus on high-quality audio, offering a "HiFi" tier for audiophiles who seek lossless, CD-quality streaming. This option provides a premium listening experience for those who prioritize audio fidelity.

Deezer has also ventured into original content, featuring exclusive releases, interviews, and curated playlists from notable artists and influencers. The platform has expanded its global reach and established partnerships with various telecommunications companies, device manufacturers, and other entities to enhance its accessibility.

5) Amazon Music: Amazon Music is a comprehensive music streaming service offered by Amazon, one of the world's largest e-commerce and technology companies. Launched in September 2007, Amazon Music has grown into a robust platform that provides users with access to a vast library of songs, albums, playlists, and podcasts.

Similar to other music streaming services, Amazon Music offers a variety of subscription plans, including Amazon Music Free (ad-supported), Amazon Music Unlimited, and Amazon Prime Music. Amazon Music Unlimited is the premium subscription tier, providing users with an extensive catalog of over 70 million songs, higher audio quality, and the ability to download music for offline listening. Amazon Prime Music is included as part of the Amazon Prime subscription and offers a more limited selection of around two million songs.



Figure 2.5: Amazon Music

One notable feature of Amazon Music is its integration with Amazon's voice-activated virtual assistant, Alexa. Users can seamlessly control their music playback using voice commands through devices like Amazon Echo speakers or other Alexa-enabled devices. This integration enhances the overall user experience, allowing for hands-free control of music playback and the creation of personalized playlists.

Amazon Music caters to a diverse audience with a wide range of genres, curated playlists, and radio stations. It also supports various platforms, including mobile devices, web browsers, smart speakers, and smart TVs, making it accessible to users across different devices.

6) Apple Music: Apple Music is a music streaming service developed by Apple Inc. that offers users a vast library of songs, albums, and playlists for on-demand streaming. Launched on June 30, 2015, Apple Music quickly established itself as a major player in the competitive music streaming industry.



Figure 2.6: Apple Music

One of Apple Music's distinctive features is its integration with the Apple ecosystem, including iOS devices, Macs, Apple Watch, Apple TV, and Windows computers. The service provides subscribers with access to an extensive catalog of over 75 million songs, spanning various genres. In addition to music, Apple Music offers a growing collection of podcasts and curated playlists.

Apple Music offers a subscription-based model with options for individual, family, and student plans. Subscribers enjoy an ad-free experience, high-quality audio streaming, and the ability to download music for offline listening. The platform also includes exclusive content, such as early album releases, artist interviews, and live performances, further enhancing its appeal to users.

The service features a user-friendly interface with sections for exploring new releases, curated playlists, radio stations, and more. Apple Music utilizes a recommendation algorithm, as well as human-curated playlists and radio stations, to help users discover new music based on their preferences.

7) Tidal: Tidal is a subscription-based music streaming service that distinguishes itself by offering high-fidelity sound quality and exclusive content. Launched in October 2014, Tidal is owned by a group of artists, including Jay-Z, who acquired the platform to emphasize artist-friendly practices and audio quality.



Figure 2.7: Tidal

8) Pandora: Pandora is a popular music streaming and internet radio service that was founded in January 2000 by Tim Westergren, Will Glaser, and Jon Kraft in the United States. It is known for its personalized radio stations and curated playlists, offering a unique listening experience based on users' musical preferences.



Figure 2.8: Pandora

9) **Robi/Airtel Yonder Music:** Robi/Airtel Yonder Music is a digital music service that provides commercially-free access to millions of songs to stream, download (cached), play, and share. It has a vast collection of both local and international music.



Figure 2.9: Robi/Yonder Music

10) **GP Music:** Grameenphone (GP) Music was a music streaming service provided by Grameenphone, one of the leading mobile network operators in Bangladesh. GP Music aimed to offer a diverse range of music content to its subscribers, allowing them to stream their favorite songs and discover new music easily.

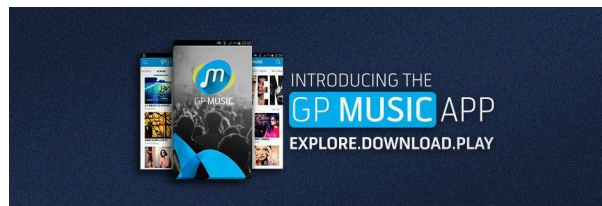


Figure 2.10: GP Music

GP Music typically provided features such as curated playlists, offline listening, and personalized recommendations to enhance the user experience. Subscribers could access a vast library of songs spanning various genres and enjoy music on their mobile devices.

11) **Shadhin Music:** Shadin Music is a complete package of audio and video streaming service and users have unlimited streaming access to millions of songs. Shadhin Music brings the largest collection of Bangla songs on your mobile or desktop anytime, anywhere. The song collection keeps growing with time. There is always something new to discover on Shadhin Music.



Figure 2.11: Shadhin Music

So, the main objective behind offering this service is to make users download the largest Bangla music app Shadhin Music and enjoy the audio and video streaming service.

12) Bongo: Bongo is a Bangladeshi digital entertainment platform that provides a wide range of content, including movies, dramas, web series, and more. It is known for offering on-demand streaming services, allowing users to access a diverse catalog of entertainment content.



Figure 2.12: Bongo

Bongo caters to the preferences of the Bangladeshi audience, offering a variety of content in Bengali. The platform features both locally produced and international content, making it a popular choice among users looking for a convenient and accessible source of entertainment.

13) Bioscope Live: Bioscope Live is a digital entertainment platform offered by Grameenphone, one of the major mobile network operators in Bangladesh. Bioscope Live primarily focuses on providing users with access to live TV channels, on-demand content, and various entertainment options on their mobile devices.



Figure 2.13: Bioscope

Key features of Bioscope Live may include live streaming of popular television channels, a diverse range of on-demand videos, and exclusive content such as dramas, movies, and music videos. The platform is designed to offer a convenient and comprehensive entertainment experience, allowing users to enjoy their favorite shows and content anytime, anywhere, using their smartphones or tablets.

2.1.2 Related Research

In comparison with established platforms like Spotify, Apple Music, and local services such as Shadhin Music or Robi Music, ANADI focuses exclusively on independent Bangla artists and user-friendly design. Unlike global platforms, which prioritize mainstream music and polished studio-quality tracks, ANADI highlights fair-quality audio submissions from emerging artists. The platform is cost-effective for users and creators, prioritizing community growth and cultural preservation over high-end commercialization.

Table 2.2: Comparative analysis with Spotify

Features (Spotify)	Yes	No	Features (Anadi)	Yes	No

Satisfactory UI	Y		Satisfactory UI	Y	
Vast Collection	Y		Vast Collection	Y	
Artist Mode	Y		Artist Mode	Y	
Bangladesh Region Based		N	Bangladesh Region Based	Y	
Podcast Available	Y		Podcast Available	Y	
Premium Membership	Y		Premium Membership	Y	
Continuous Updates	Y		Continuous Updates	Y	
Chart Analysis	Y		Chart Analysis	Y	

Table 2.3: Comparative analysis with Deezer

Features (Deezer)	Yes	No	Features (Anadi)	Yes	No
Satisfactory UI	Y		Satisfactory UI	Y	
Vast Collection	Y		Vast Collection	Y	
Artist Mode	Y		Artist Mode	Y	
Bangladesh Region Based		N	Bangladesh Region Based	Y	
Podcast Available	Y		Podcast Available	Y	
Premium Membership	Y		Premium Membership	Y	
Continuous Updates	Y		Continuous Updates	Y	
Chart Analysis		N	Chart Analysis	Y	

Table 2.4: Comparative analysis with Soundcloud

Features (SoundCloud)	Yes	No	Features (Anadi)	Yes	No
Satisfactory UI		N	Satisfactory UI	Y	
Vast Collection		N	Vast Collection	Y	
Artist Mode	Y		Artist Mode	Y	

Bangladesh Region Based		N	Bangladesh Region Based	Y	
Podcast Available		N	Podcast Available	Y	
Premium Membership	Y		Premium Membership	Y	
Continuous Updates	Y		Continuous Updates	Y	
Chart Analysis		N	Chart Analysis	Y	

Table 2.5: Comparative analysis with YouTube Music

Features (YouTube Music)	Yes	No	Features (Anadi)	Yes	No
Satisfactory UI	Y		Satisfactory UI	Y	
Vast Collection	Y		Vast Collection	Y	
Artist Mode	Y		Artist Mode	Y	
Bangladesh Region Based		N	Bangladesh Region Based	Y	
Podcast Available	Y		Podcast Available	Y	
Premium Membership	Y		Premium Membership	Y	
Continuous Updates	Y		Continuous Updates	Y	
Chart Analysis	Y		Chart Analysis	Y	

Table 2.6: Comparative analysis with Apple Music

Features (Apple Music)	Yes	No	Features (Anadi)	Yes	No
Satisfactory UI	Y		Satisfactory UI	Y	
Vast Collection	Y		Vast Collection	Y	
Artist Mode		N	Artist Mode	Y	
Bangladesh Region Based		N	Bangladesh Region Based	Y	
Podcast Available	Y		Podcast Available	Y	
Premium Membership	Y		Premium Membership	Y	

Continuous Updates	Y		Continuous Updates	Y	
Chart Analysis		N	Chart Analysis	Y	

Table 2.7: Comparative analysis with Amazon Music

Features (Amazon Music)	Yes	No	Features (Anadi)	Yes	No
Satisfactory UI	Y		Satisfactory UI	Y	
Vast Collection	Y		Vast Collection	Y	
Artist Mode		N	Artist Mode	Y	
Bangladesh Region Based		N	Bangladesh Region Based	Y	
Podcast Available	Y		Podcast Available	Y	
Premium Membership	Y		Premium Membership	Y	
Continuous Updates	Y		Continuous Updates	Y	
Chart Analysis	Y		Chart Analysis	Y	

Table 2.8: Comparative analysis with GP Music

Features (GP Music)	Yes	No	Features (Anadi)	Yes	No
Satisfactory UI	Y		Satisfactory UI	Y	
Vast Collection		N	Vast Collection	Y	
Artist Mode		N	Artist Mode	Y	
Bangladesh Region Based	Y		Bangladesh Region Based	Y	
Podcast Available	Y		Podcast Available	Y	
Premium Membership	Y		Premium Membership	Y	
Continuous Updates	Y		Continuous Updates	Y	
Chart Analysis		N	Chart Analysis	Y	

Table 2.9: Comparative analysis with Shadhin Music

Features (Shadhin Music)	Yes	No	Features (Anadi)	Yes	No
Satisfactory UI	Y		Satisfactory UI	Y	
Vast Collection	Y		Vast Collection	Y	
Artist Mode		N	Artist Mode	Y	
Bangladesh Region Based	Y		Bangladesh Region Based	Y	
Podcast Available	Y		Podcast Available	Y	
Premium Membership	Y		Premium Membership	Y	
Continuous Updates	Y		Continuous Updates	Y	
Chart Analysis		N	Chart Analysis	Y	

2.3 Gap Analysis

Table 2.10: Gap analysis

Name	Features	Yes/No	Features [ANADI]	Yes/No
Spotify	Bangladesh Region Based	N	Bangladesh Region Based	Y
Deezer	Bangladesh Region Based	N	Bangladesh Region Based	Y
Deezer	Chart Analysis	N	Chart Analysis	Y
Soundcloud	Satisfactory UI	N	Satisfactory UI	Y
Soundcloud	Vast Collection	N	Vast Collection	Y
Soundcloud	Bangladesh Region Based	N	Bangladesh Region Based	Y
Soundcloud	Podcast Available	N	Podcast Available	Y
Soundcloud	Chart Analysis	N	Chart Analysis	Y

YouTube Music	Bangladesh Region Based	N	Bangladesh Region Based	Y
Apple Music	Artist Mode	N	Artist Mode	Y
Apple Music	Bangladesh Region Based	N	Bangladesh Region Based	Y
Apple Music	Chart Analysis	N	Chart Analysis	Y
Amazon Music	Artist Mode	N	Artist Mode	Y
Amazon Music	Bangladesh Region Based	N	Bangladesh Region Based	Y
GP Music	Vast Collection	N	Vast Collection	Y
GP Music	Artist Mode	N	Artist Mode	Y
GP Music	Chart Analysis	N	Chart Analysis	Y
Shadhin Music	Artist Mode	N	Artist Mode	Y
Shadhin Music	Chart Analysis	N	Chart Analysis	Y

2.4 Summary

Independent Bangla artists face limited visibility on global platforms and high production costs. Existing platforms also lack features specifically for Bangla music enthusiasts. ANADI provides a solution by offering a dedicated, cost-effective, and accessible platform for artists and listeners to share and discover Bangla music.

Key Challenges

1. Artist Outreach: Encouraging independent artists to participate and trust the platform for their music's growth.
2. Audio Quality: Managing fair-quality audio submissions while ensuring a pleasant user experience.
3. User Retention: Building loyalty in a competitive market dominated by larger platforms with more resources.
4. Scalability: Expanding the platform's functionality and database as the user base grows.

5. Cultural Representation: Maintaining a balance between traditional and modern Bangla music to appeal to diverse audiences.
6. Financial Sustainability: Generating sufficient revenue through ads or sponsorships while keeping the service affordable for users and artists.

Chapter 3

Research Methodology

The development of Anadi involved gathering feedback from independent artists and music listeners. User surveys and interviews helped identify the needs of artists for better exposure. Technical research focused on creating a scalable platform, using HTML, CSS, JavaScript, and PHP for basic features, with plans to upgrade to React and Django. This approach ensures the platform is both user-friendly and capable of handling future growth.

3.1 Methodology/Requirement Analysis & Design Specification

3.1.1 Overview

The Methodology/Requirement Analysis & Design Specification chapter provides a systematic approach to the development of the ANADI platform. It begins by identifying the core requirements for creating a scalable and user-friendly music streaming platform tailored for independent Bangla music artists. The methodology emphasizes a user-centric design, leveraging modern web technologies and iterative development to ensure continuous improvement and adaptability.

3.1.2 Proposed Methodology/ System Design

The ANADI platform operates as a bridge between independent Bangla music artists and their audience. The process involves multiple stakeholders: artists, system users, and audiences, managed by a super admin. Below is an outline of the main business processes:

1. **Artist Registration and Management:**
 - Artists register and create profiles on the platform.
 - Upload fair-quality MP3 files with relevant metadata (title, album, genre).
 - Admins manage the approval, categorization, and display of these files.
2. **Audience Interaction:**
 - Audiences sign up/login to explore music, interact with tracks (like, search, play).
 - Top-ranked artists and tracks are dynamically displayed based on audience interactions.
3. **System Maintenance:**
 - Super Admin oversees system operations, ensuring smooth user experiences.
 - Moderators manage music content, genres, and artists' profiles.

4. Monetization and Sustainability:

- Advertisement spaces (floating footer) generate revenue.
- Potential for premium features or subscription models for enhanced user experiences.

3.1.3 Functional and Nonfunctional Requirements

Requirements were gathered through interviews with independent artists, audience surveys, and comparative analysis of existing platforms. Key insights include:

- **Functional Requirements:**

1. Easy-to-use interfaces for artists to upload music and audiences to explore.
2. Capability to manage genres, albums, and user data.
3. Real-time ranking of artists and songs based on interactions (likes, plays).
4. Search functionality to discover tracks and artists effortlessly.

- **Non-Functional Requirements:**

1. Scalability to handle increasing user traffic and music files.
2. Minimalist design for aesthetic appeal and usability.
3. Reliable backend to ensure fast loading and uninterrupted streaming.

3.1.4 Context Diagram

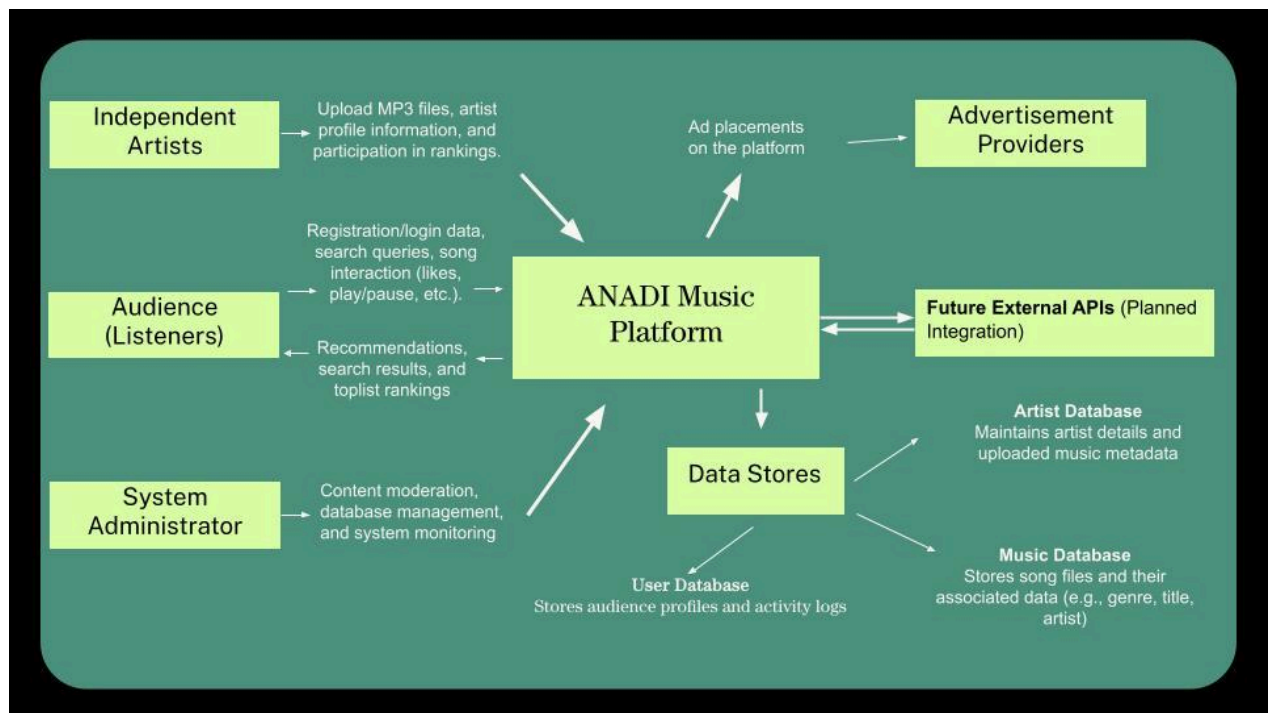


Figure 3.1: Context Diagram

3.1.5 Data Flow Diagram Level 1

The **Data Flow Diagram (Level 1)** illustrates key data interactions in the system. Core modules include:

1. **Album Management:** Stores and categorizes albums by artists.
2. **Music Management:** Handles uploaded MP3 files, including metadata like genre, title, and artist.
3. **Genre Management:** Maintains a database of genres for classification.
4. **System User Management:** Stores data for super admin, moderators, artists, and audiences.
5. **Login Management:** Validates user credentials and permissions for platform access.
6. **Artist Management:** Tracks artist profiles, uploaded music, and performance stats.

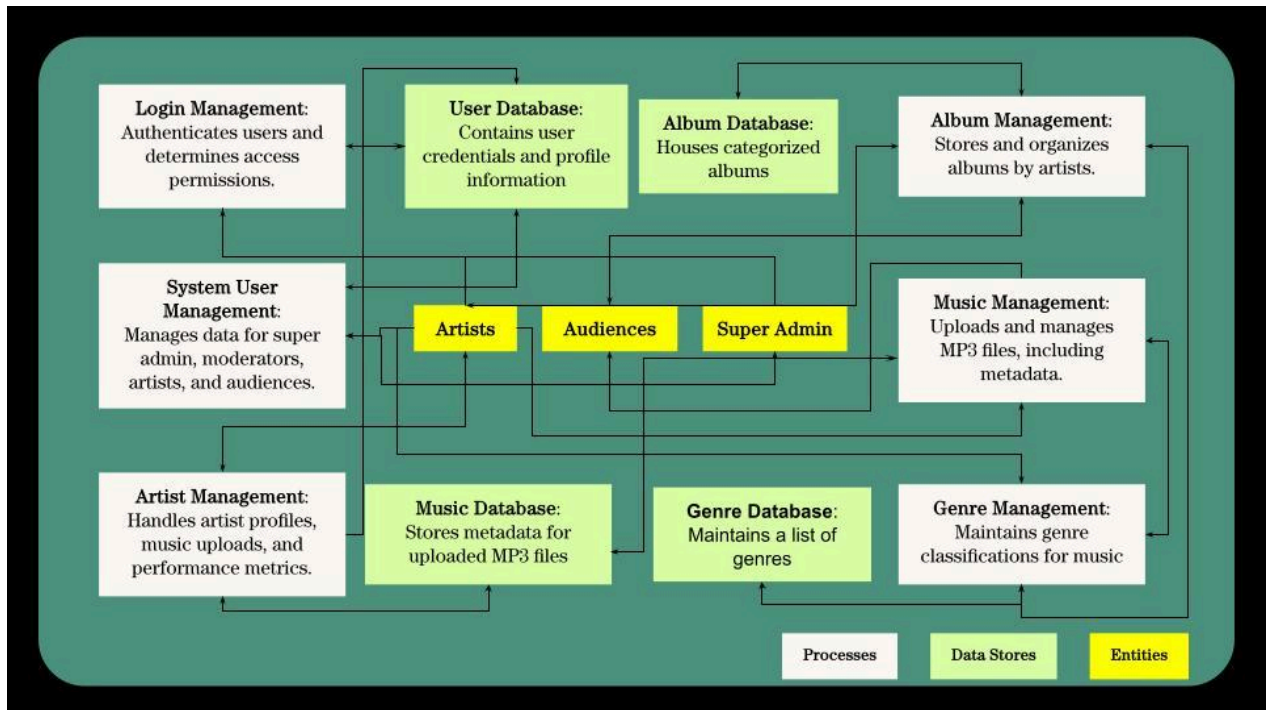


Figure 3.2: Data Flow Diagram (Level 1)

3.1.6 UI Design

Design Philosophy

The UI design of the platform focuses on simplicity and usability, ensuring that users can easily interact with the platform without unnecessary distractions. The clean and minimalist aesthetic highlights the music and artists, aligning with the platform's goal to support independent creators.

Key Design Elements

1. Color Scheme

- A minimal color palette has been used to provide a clean and professional look.
- Neutral tones are employed for backgrounds, with subtle accents to highlight buttons, navigation bars, and interactive elements.

2. Typography

- Fonts are chosen for readability and elegance, ensuring clarity on both desktop and mobile devices.

3. Navigation

- A fixed navigation bar ensures users can easily move between key sections of the platform:
 - Home Page
 - Top List Page
 - Search Page
 - User Profile Page
 - Upload Music Page

4. Layout

- **Responsive Design:** Pages are optimized for various screen sizes, offering an excellent user experience on both desktop and mobile devices.
- **Consistent Structure:** Every page follows a consistent grid system to maintain uniformity and coherence across the platform.

3.2 Detailed Methodology and Design

The design of the platform has been intentionally kept minimalistic to provide users with a simple and intuitive interface. The primary goal is to ensure a seamless experience for independent artists and music enthusiasts, making it easy to explore, upload, and enjoy music.

Page Design and Features

1. Login Page

- Purpose: Enables registered users to securely access the platform.
- Technology: Designed using HTML, CSS, and JavaScript with PHP handling server-side authentication. User credentials are stored in a MySQL database.

2. Signup Page

- Purpose: Allows new users to register by providing information like name, username, email, social media links, and music upload links.
- Technology: Built using HTML, CSS, JavaScript, and PHP, with database integration via MySQL to store user information securely.

3. Home Page

- Features:
 - Displays 10 songs per page (with pagination for scalability).
 - Includes song names, images, play/pause buttons, synchronized seek bars, and a "love" button to show user appreciation for songs.

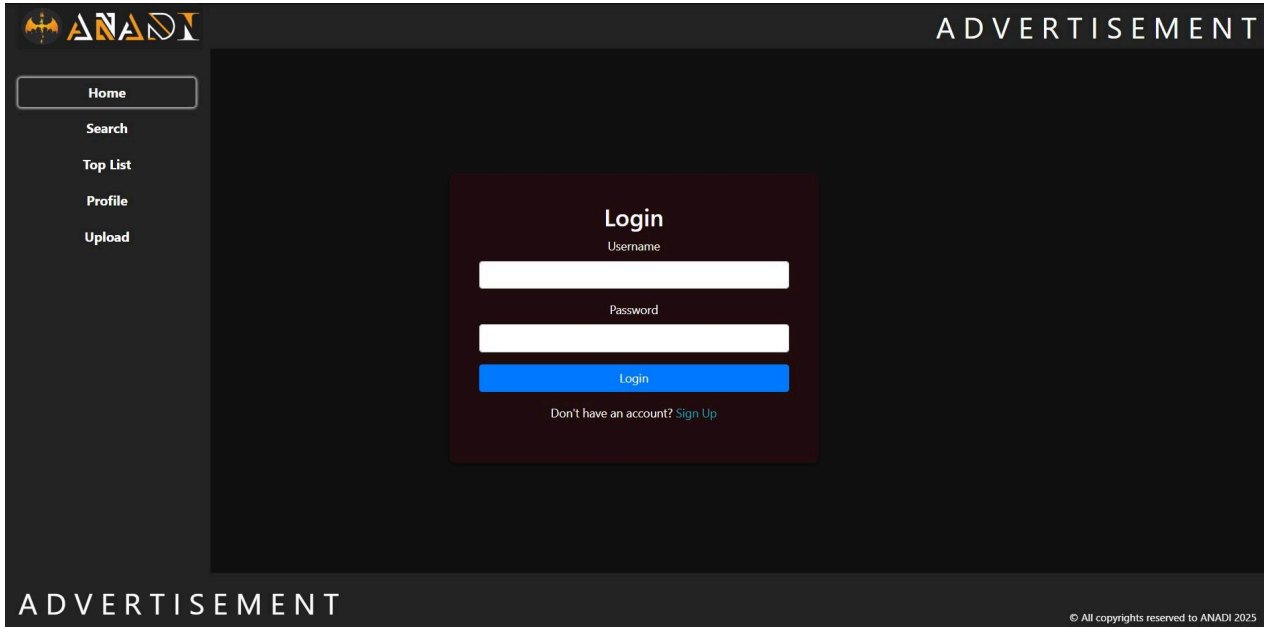
- Advertisements are displayed in a floating footer space.
 - Design: Minimalistic layout using HTML, CSS, and JavaScript for a visually clean and interactive experience.
- 4. **Search Page**
 - Purpose: Allows users to search for music by artist, album, or song title.
 - Technology: Currently retrieves data from an internal JSON format but is designed to scale for external database integration in the future.
- 5. **Top List Page**
 - Purpose: Displays rankings of artists and their songs based on user engagement, such as "loves."
 - Design: Built with HTML, CSS, and JavaScript for dynamic rankings.
- 6. **User Profile Page** (Planned Feature)
 - Purpose: Allows users to view and edit their profile information, track their favorite songs, and monitor uploads.
 - Future Development: To be integrated with the user database and personalized recommendations.
- 7. **Upload Music Page** (Planned Feature)
 - Purpose: Enables artists to upload their music, ensuring a platform for independent creators to showcase their work.
 - Future Development: To include fields for song details, album artwork, and an audio upload feature.

Visual Design Approach

- **Color Scheme:** Minimalistic to focus attention on the music and artist profiles.
- **Navigation:** A simple navigation bar connects the Home Page, Top List Page, and Search Page for easy access.
- **Footer:** Floating footer space is reserved for advertisements, especially for promoting new artists.

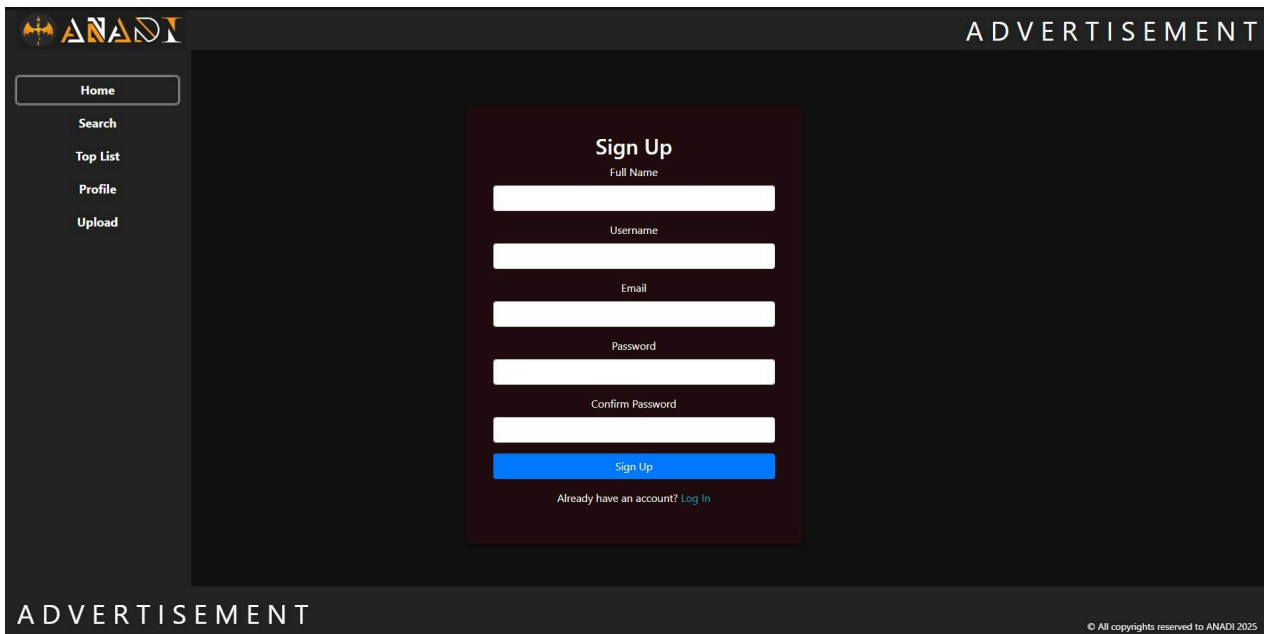
Scalability and Future Plans

- The system is designed to scale by integrating advanced database systems, supporting external APIs, and transitioning to modern frameworks:
 - **Frontend:** Transition to React for a dynamic and responsive interface.
 - **Backend:** Migration to Django for robust and scalable application logic.
 - **Database:** Google Cloud for efficient data storage and retrieval.



The screenshot shows the ANADI website's login interface. At the top left is the ANADI logo, and at the top right is the word "ADVERTISEMENT". A dark sidebar on the left contains a menu with "Home" (highlighted), "Search", "Top List", "Profile", and "Upload". The main content area features a dark purple "Login" form with fields for "Username" and "Password", a blue "Login" button, and a link for "Sign Up" for new users. The footer includes another "ADVERTISEMENT" label and a copyright notice: "© All copyrights reserved to ANADI 2025".

Figure 3.3: Login Page



The screenshot shows the ANADI website's sign-up interface. It features the same header and sidebar as the login page. The main content area displays a dark purple "Sign Up" form with fields for "Full Name", "Username", "Email", "Password", and "Confirm Password", followed by a blue "Sign Up" button. A link for "Log In" for existing users is provided at the bottom of the form. The footer contains the "ADVERTISEMENT" label and the copyright notice: "© All copyrights reserved to ANADI 2025".

Figure 3.4: Register Page

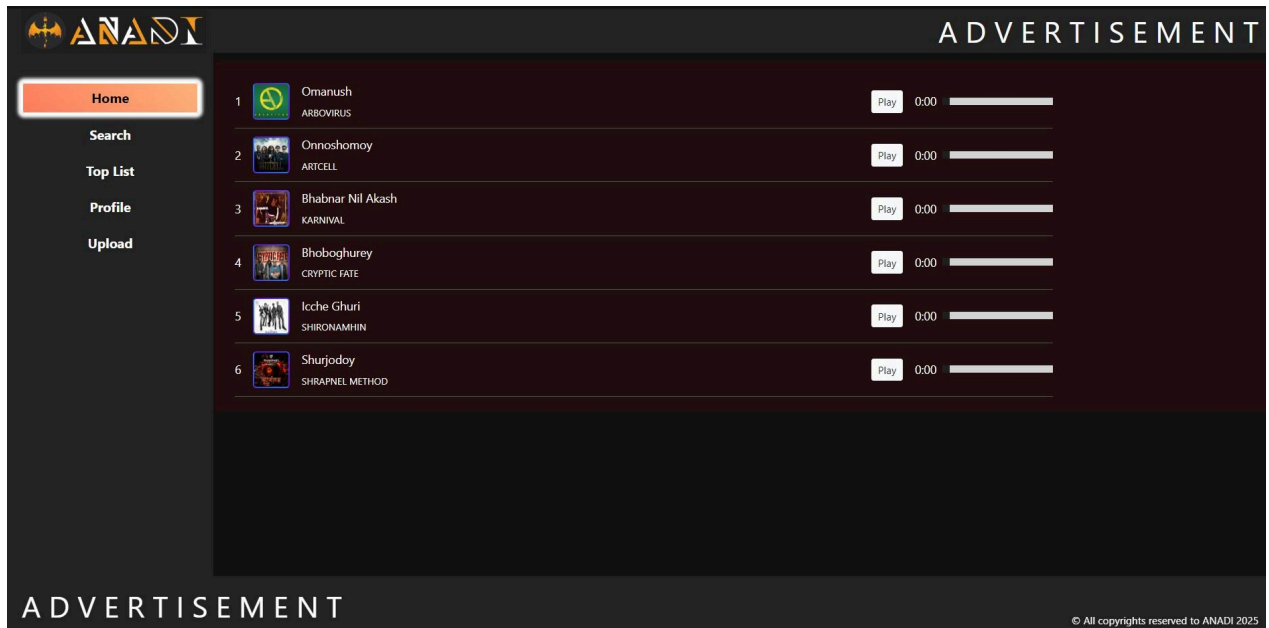


Figure 3.5: Home Page

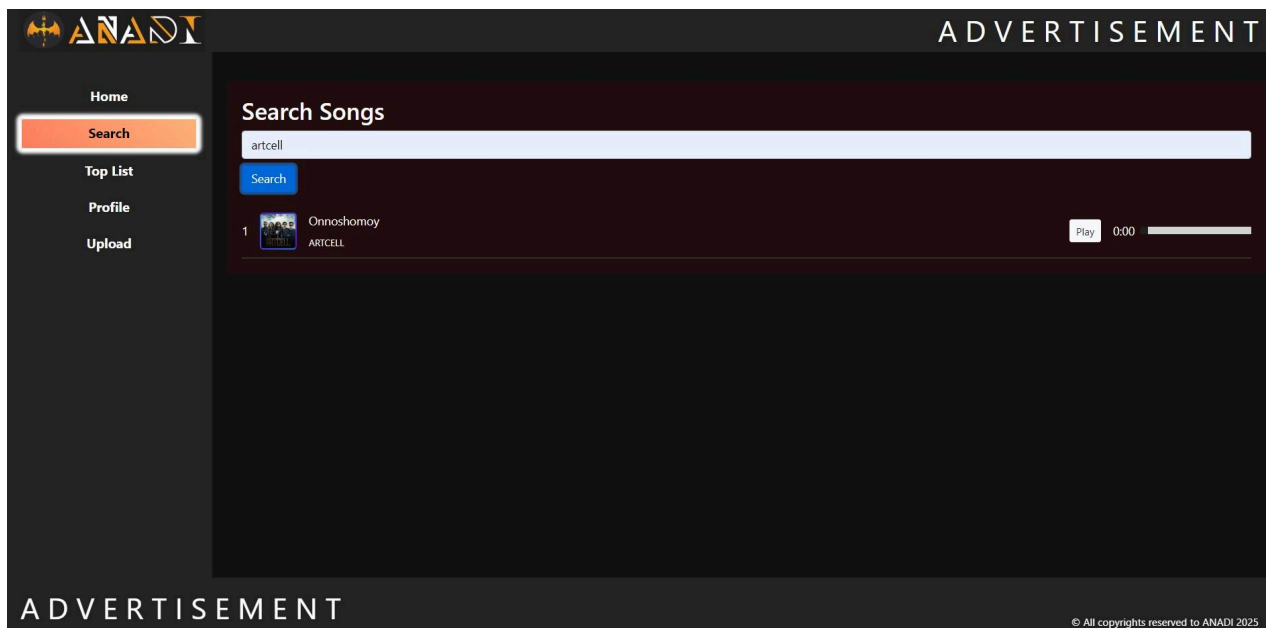


Figure 3.6: Search Page



Home

Search

Top List

Profile

Upload

ADVERTISEMENT

Top List Daily

Rank	Song	Artist	Stream
1	Example Song #1	Artist Name #1	1,234,567
2	Example Song #2	Artist Name #2	2,345,678
3	Example Song #3	Artist Name #3	3,456,789
4	Example Song #4	Artist Name #4	4,567,890
5	Example Song #5	Artist Name #5	5,678,901
6	Example Song #6	Artist Name #6	6,789,012
7	Example Song #7	Artist Name #7	7,890,123
8	Example Song #8	Artist Name #8	8,901,234
9	Example Song #9	Artist Name #9	9,012,345
10	Example Song #10	Artist Name #10	10,123,456

ADVERTISEMENT

© All copyrights reserved to ANADI 2025

Figure 3.7: Top List Page

ANADI		ADVERTISEMENT	
Home Search Top List Profile Upload	User Profile		
	Full Name		
		Update	
	Username		
		Update	
	Email		
		Update	
	Social Media Link		
		Update	
	Contact Number		
		Update	
ADVERTISEMENT		© All copyrights reserved to ANADI 2025	

Figure 3.8: User Profile Page

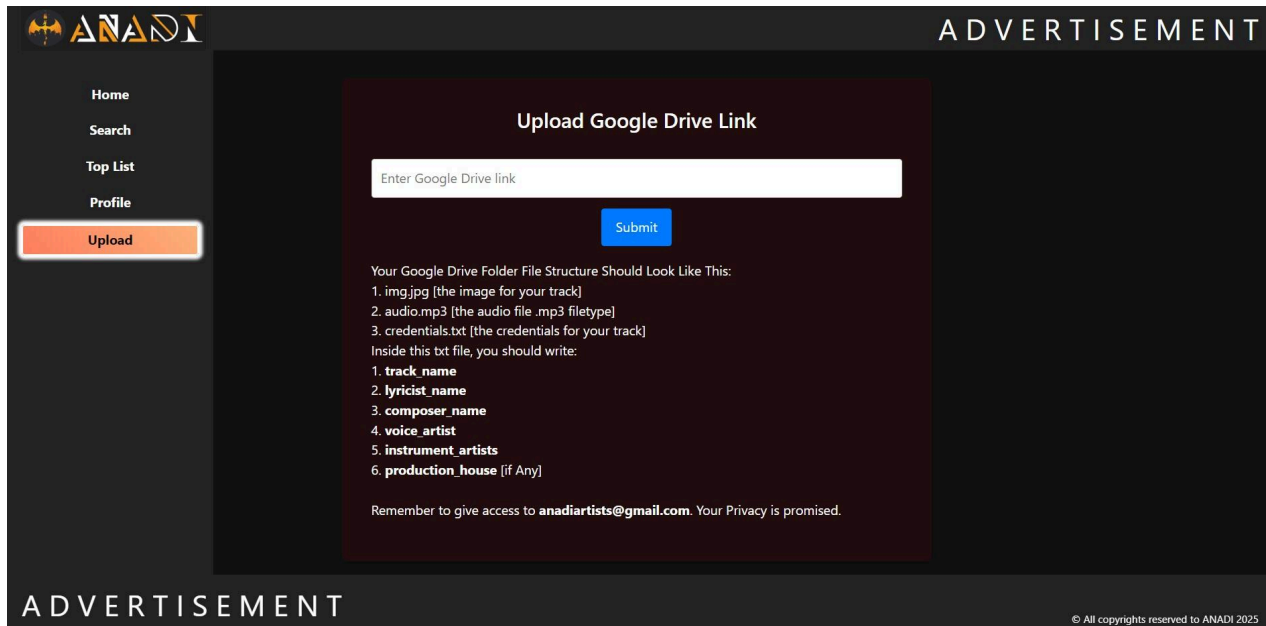


Figure 3.9: Upload Page

3.3 Project Plan

Phase 1: Research and Conceptualization

Timeline: 2 Weeks

- Identify the needs and challenges of independent artists.
- Research existing platforms and analyze their strengths and weaknesses.
- Define the platform's unique value proposition: promoting Bangla language, music, and art.
- Plan the core features and create a wireframe for the UI design.

Phase 2: Prototype Development

Timeline: 4 Weeks

- **Frontend Development:**
 - Create basic HTML pages for login, signup, home, top list, and search functionality.
 - Implement CSS for styling with a minimalistic approach.
 - Add interactivity using JavaScript for buttons, navigation, and audio playback.
- **Backend Development:**
 - Set up a database using MySQL to manage user data (registration and login).
 - Develop PHP scripts for server-side processing of user authentication.
- **Scalability Consideration:**
 - Ensure data is structured to allow seamless scaling (e.g., JSON for music storage).

Phase 3: Feature Completion

Timeline: 3 Weeks

- Finalize the homepage with pagination, song playback, and user engagement features (love button).
- Enhance the search page to handle more extensive data in the future.
- Implement a floating footer for advertisements and promotions.
- Build a top list page to rank artists and their music dynamically.

Phase 4: Testing and Refinement

Timeline: 2 Weeks

- Perform functionality testing on all pages.
- Conduct user testing sessions to gather feedback.
- Refine the design based on feedback, ensuring usability and clarity.

Phase 5: Future Roadmap

Timeline: Ongoing Development

- Transition the platform to modern frameworks:
 - **Frontend:** React for a responsive and dynamic user interface.
 - **Backend:** Django for robust application logic.
 - **Database:** Google Cloud for scalability and reliability.
- Add advanced features like:
 - A user profile page for personalization.
 - An upload music page to support artists directly.
 - APIs for improved user experience (e.g., personalized recommendations).
- Host community-driven programs to collect music from artists across campuses, seasons, and events.

Project Management Tools

- **Task Management:** Trello or Asana for tracking tasks and deadlines.
- **Version Control:** Git for collaborative development and versioning.
- **Communication:** Slack or email for team coordination.

Milestones and Deliverables

- **Prototype Completion:** Functional login, signup, homepage, search, and top list pages.
- **Testing and Feedback:** Fully tested features with usability improvements based on user feedback.
- **Future Expansion:** A clear plan for transitioning to scalable technologies and adding advanced features.

3.4 Task Allocation

To ensure efficient development and progress, tasks are distributed based on specific project phases. The responsibilities are divided across different roles based on skills and expertise required for each phase. Here's a breakdown of the task allocation:

Phase 1: Research and Conceptualization

Responsibilities:

- **Lead Developer:**
 - Conduct research on the needs of independent artists and analyze existing platforms.
 - Define the unique value proposition of the platform.
 - Create wireframes and sketches for the platform's design.

Phase 2: Prototype Development

Responsibilities:

- **Frontend Development:**
 - **Lead Developer:**
 - Design and develop the basic HTML structure for the login, signup, home, top list, and search pages.
 - Implement CSS to achieve a minimalistic design.
 - Add JavaScript for interactive elements (e.g., buttons, navigation, audio player).
 - **Collaborator:**
 - Assist in testing and refining the UI components, ensuring responsiveness and accessibility.
- **Backend Development:**
 - **Lead Developer:**
 - Set up MySQL database to manage user data.
 - Develop PHP scripts for user registration, login, and data management.
 - **Collaborator:**
 - Assist in database setup and integration with frontend components.

Phase 3: Feature Completion

Responsibilities:

- **Frontend Development:**
 - **Lead Developer:**
 - Finalize homepage, ensuring pagination and user engagement features (e.g., "love" button).
 - Implement the floating footer for advertisements.

- Complete the top list page to display dynamic rankings.
- **Collaborator:**
 - Assist with UI refinements and integrate features for smooth interaction.
- **Backend Development:**
 - **Lead Developer:**
 - Finalize database structure for storing song information, artist data, and user preferences.
 - Develop backend scripts to support new features (e.g., dynamic rankings, song playback).

Phase 4: Testing and Refinement

Responsibilities:

- **Lead Developer:**
 - Perform functionality testing and troubleshoot any issues.
 - Conduct user testing sessions, gather feedback, and iterate on the design based on insights.
- **Collaborator:**
 - Assist with debugging, user testing, and collecting feedback.
 - Provide suggestions for UI/UX improvements.

Phase 5: Future Roadmap (Ongoing Development)

Responsibilities:

- **Lead Developer:**
 - Plan and execute the transition to React for the frontend and Django for the backend.
 - Set up Google Cloud for database management.
 - Integrate advanced features like the music upload page, user profiles, and external APIs for enhanced user experience.

Additional Roles

- **UI/UX Designer:**
 - Assist with the creation of wireframes, mockups, and design elements.
 - Provide feedback on user interface design to ensure a seamless experience.
- **Quality Assurance:**
 - Conduct extensive testing for bugs, performance issues, and user feedback.
 - Verify that all features work as expected and help improve the final version.

3.5 Summary

The project's research methodology was designed to understand the needs of independent artists, analyze existing music platforms, and ensure that the developed platform meets the specific requirements of its target audience. Initial research focused on understanding the challenges faced by emerging artists, particularly those from underrepresented regions and languages. This research informed the design and functionality of the platform, ensuring it provides value by promoting Bangla music and supporting independent artists.

The methodology involved competitor analysis, where various music streaming services were evaluated for their strengths and weaknesses. Key features such as user engagement, music uploads, search functionality, and artist rankings were carefully considered to build a platform with a unique focus on independent creators.

The development process was approached in phases, beginning with wireframing and conceptualization, followed by prototype development. The research also included exploring the technical stack, selecting tools, frameworks, and databases that would allow the platform to scale efficiently. Technologies like HTML, CSS, JavaScript, PHP, and MySQL were chosen for the prototype, with a future roadmap to transition to React, Django, and Google Cloud for improved performance and scalability.

User-centered design was central to the methodology, ensuring the platform's interface was intuitive and accessible. Feedback from potential users was gathered during testing phases to refine the design and enhance user experience. The platform was built with a minimalist design approach to keep the focus on the music and artists.

Overall, the research methodology ensured that the platform addressed the needs of both the artists and listeners, while setting a solid foundation for future growth and scalability. The process was dynamic, allowing for continuous learning and iteration as the project's progress.

Chapter 4

Implementations and Results

Anadi was implemented with features like user registration, login, song streaming, and basic navigation. The platform allows independent artists to upload and share their music, with a ranking system for songs. Results so far show positive user engagement, with a growing number of independent artists contributing music. As the platform scales, more features like personalized recommendations and artist profiles will be added to enhance the user experience.

4.1 Environment Setup

The development environment for ANADI was set up using **Visual Studio Code** as the primary code editor. **XAMPP** was used for local server setup, allowing smooth database integration. XAMPP provides an easy-to-use platform with Apache, MySQL, and PHP for managing the backend and database. The frontend was developed using **HTML**, **CSS**, and **Bootstrap** for responsive design. **JavaScript** was used to enhance interactivity, while **PHP** handled the backend logic, including user authentication and data management. The database was structured in **MySQL** to store user data and music information, ensuring easy scalability for future expansion.

4.2 Testing and Evaluation / Performance / Comparative Analysis

The platform underwent testing in multiple phases to evaluate its performance and identify any issues.

- **Functionality Testing:** All pages, including login, signup, home, search, and top list, were tested for proper functionality.
- **Database Testing:** MySQL queries were tested to ensure proper data storage and retrieval, with no errors in user registration, login, and song data management.
- **Performance Testing:** The system's performance was evaluated under low traffic conditions with a small number of users and songs. Response time for page load and database queries was measured to ensure smooth operation.
- **Comparative Analysis:** The platform was compared to other music streaming services to understand its advantages, such as its focus on independent artists and Bangla music. While other platforms may have broader music libraries, Anadi's uniqueness lies in supporting lesser-known artists and showcasing regional music, particularly in Bangla.

4.3 Results and Discussion

The implementation of the platform achieved its goal of providing a simple, user-friendly experience for independent artists. The core features, such as user registration, song playback, and ranking, functioned as expected.

- **User Engagement:** The "love" button feature was effective in allowing users to engage with songs, which is essential for artists looking to build a following.
- **Music Playback:** The audio player worked smoothly, with songs playing automatically and the seek bar functioning correctly.
- **Scalability:** The platform was designed with scalability in mind, and the current setup can easily handle more users and songs in the future. The database structure is flexible, allowing for the addition of new features, such as artist profiles or advanced search capabilities.
- **Challenges:** Some minor performance issues were noted with higher numbers of songs, which will be addressed in future updates as the platform transitions to more scalable technologies like Django and React.

4.4 Summary

In summary, the implementation of the platform has been successful in meeting its core objectives. The environment setup using Visual Studio Code and XAMPP provided a stable base for development, and testing confirmed the functionality and usability of key features. While the platform is still in its early stages with a limited number of users and songs, the results demonstrate its potential to support independent artists and promote Bangla music. Future improvements will focus on enhancing scalability, performance, and user experience as the platform grows.

Chapter 5

Engineering Standards and Design Challenges

Anadi follows standard web development practices, using HTML, CSS, JavaScript, PHP, and MySQL for the initial build. However, designing a scalable and user-friendly platform has posed challenges, especially with handling large amounts of music data and ensuring smooth playback. The transition to more advanced technologies like React and Django, along with integrating cloud-based solutions, is crucial to meet performance and scalability demands.

5.1 Compliance with the Standards

5.1.1 Software Standards

To ensure the software components of **Anadi** adhere to engineering standards, the following practices have been implemented:

1. **Code Quality and Maintainability**
 - The code follows clean coding principles with proper indentation, comments, and readability in mind. This ensures easy future updates and scalability.
2. **Standard Libraries and Frameworks**
 - Popular and community-recommended libraries, such as Bootstrap for UI, and standard web technologies like HTML5, CSS3, and JavaScript, have been used to align with global software standards.
3. **Security Practices**
 - User data, including login credentials, is stored securely in a MySQL database. Future updates will incorporate advanced encryption techniques and industry-standard security protocols.
4. **Performance Optimization**
 - The software has been designed with scalability in mind. From handling user registrations to music streaming, the system uses efficient queries and modular development to ensure smooth performance even as user numbers grow.
5. **Compatibility and Cross-Browser Support**
 - The platform is developed to work seamlessly on popular web browsers, ensuring a consistent user experience across devices.
6. **Adherence to Best Practices**
 - Future upgrades will integrate Django for backend and Google Cloud for databases, ensuring compliance with modern cloud standards and efficient data management.

These steps aim to provide a reliable and scalable foundation for independent artists and users, supporting the growth of the Bangla music ecosystem.

5.1.2 Hardware Standards

The development and deployment of **Anadi** align with standard hardware practices to ensure efficiency, scalability, and user satisfaction. Below are the key considerations:

1. **Server Requirements**

- **Anadi** operates on shared hosting during its initial phase, utilizing XAMPP for local development. Future plans include transitioning to scalable cloud-based servers like Google Cloud, ensuring support for increased traffic and large-scale data handling.

2. **Storage Standards**

- Music files, predominantly in MP3 format, are stored on standard drives, ensuring accessibility and performance. As the platform grows, cloud storage solutions will be adopted to handle larger volumes of audio files and user data.

3. **Device Compatibility**

- The platform is designed to be compatible with standard consumer devices, including desktops, laptops, tablets, and smartphones, ensuring a smooth user experience across hardware configurations.

4. **Networking Hardware**

- Development systems use reliable internet hardware to support smooth streaming and testing of audio playback. Once deployed on cloud servers, robust networking infrastructure will ensure uninterrupted music streaming for end-users.

5. **Scalability**

- Future upgrades to Google Cloud and integration with scalable backend systems will adhere to modern hardware standards, ensuring the platform can accommodate growing user bases and artist uploads without performance degradation.

These considerations ensure **Anadi** can provide reliable service for independent artists and music lovers, even as it scales to meet future demands.

5.1.3 Communication Standards

To ensure seamless communication between users, the platform, and external systems, **Anadi** adheres to the following communication standards:

1. **HTTP/HTTPS Protocols**

- The platform uses the standard HTTP protocol for data exchange during the development phase. Future implementation of HTTPS will secure user interactions, protecting sensitive data like login credentials and user information.

2. **API Integration**

- APIs will be utilized for advanced functionalities such as user recommendations, real-time rankings, and third-party integrations. This ensures interoperability with

external services while adhering to RESTful standards for structured communication.

3. Data Transfer

- JSON format is used for internal data handling, such as search functionalities. This format ensures lightweight, efficient, and scalable data exchange between the front-end and back-end systems.

4. Responsive Communication

- The platform supports fast, responsive communication between user interfaces and the database, ensuring minimal latency during operations like song streaming, ranking updates, and user interactions.

5. Scalable Networking

- Future upgrades will include cloud-based communication infrastructure that supports scaling without compromising speed or reliability.

6. Accessibility Standards

- Communication protocols ensure the platform is accessible across various devices and network conditions, catering to users in regions with differing internet speeds.

These standards aim to provide a secure, efficient, and user-friendly communication framework, supporting the growth of **Anadi** as a platform for independent artists.

5.2 Impact on Society, Environment and Sustainability

5.2.1 Impact on Life

Anadi has the potential to positively impact individual lives, especially those of independent artists and music enthusiasts:

1. Empowerment of Artists

- Independent artists gain a platform to showcase their talent, promoting their work to a wider audience without relying on traditional music industry barriers.
- Artists can share their music directly with listeners, fostering creative freedom and ownership of their work.

2. Promotion of Cultural Heritage

- By prioritizing Bangla language and music, **Anadi** contributes to preserving and celebrating cultural identity, offering artists and listeners a space to connect with their roots.

3. Access to Music for All

- Music enthusiasts, regardless of location, have access to diverse genres and unique creations from independent artists, enriching their listening experiences.
- Users can discover new talent and support emerging artists, building a community centered around music appreciation.

4. Inspiration and Growth

- Aspiring artists are encouraged to participate, gain exposure, and grow professionally.

- **Anadi** provides opportunities for personal fulfillment and career development for artists who might otherwise remain unnoticed.

This initiative directly enriches lives by fostering creativity, promoting inclusivity, and enhancing the connection between artists and their audiences.

5.2.2 Impact on Society & Environment

Impact on Society

1. Cultural Enrichment

- By supporting Bangla music and art, **Anadi** plays a vital role in preserving and promoting cultural heritage. This strengthens community identity and fosters pride in local art forms.

2. Social Inclusivity

- The platform democratizes opportunities for artists, enabling those from underserved or remote areas to showcase their talent and reach broader audiences.
- It helps create a collaborative community where artists and listeners interact, share feedback, and grow together.

3. Economic Opportunities

- Emerging artists can leverage **Anadi** to gain visibility, attract sponsors, and monetize their music, contributing to local and regional economies.
- Advertisements and promotional campaigns for new artists can also generate revenue streams and encourage partnerships.

Impact on Environment

1. Digital Format Advantages

- By operating as an online music platform, **Anadi** reduces the need for physical media production, such as CDs and DVDs, minimizing waste and resource consumption.

2. Sustainable Practices

- The platform encourages digital submissions, eliminating the environmental impact associated with traditional distribution methods like shipping physical copies of music.

Through these contributions, **Anadi** aims to foster societal development while maintaining an environmentally conscious approach, ensuring a sustainable and inclusive impact.

5.2.3 Ethical Aspects

Anadi prioritizes ethical principles to ensure fairness, inclusivity, and integrity in its operations:

1. Fair Representation

- The platform treats all artists equally, giving independent creators an opportunity to showcase their talent without bias or discrimination.

- Ranking systems and toplists are designed to be transparent, based on user interactions and genuine feedback rather than external influence.
- 2. **Data Privacy and Security**
 - User and artist data, including personal information and uploaded music, is safeguarded through secure database management and privacy-focused protocols.
 - Ethical handling of data ensures users' trust and confidence in the platform.
- 3. **Respect for Intellectual Property**
 - **Anadi** upholds copyright laws, ensuring artists retain ownership of their music and are credited appropriately for their work.
 - The platform strictly avoids unauthorized use of content and encourages ethical sharing practices among users.
- 4. **Cultural Sensitivity**
 - The platform promotes Bangla language and music while being inclusive of diverse audiences, ensuring respect for cultural values and traditions.
- 5. **Community Building**
 - **Anadi** fosters a supportive environment that encourages collaboration rather than competition, allowing artists to grow without unethical practices like plagiarism or defamation.

By adhering to these ethical standards, **Anadi** establishes itself as a trustworthy and inclusive platform for artists and music enthusiasts alike.

5.2.4 Sustainability Plan

Anadi is designed with long-term sustainability in mind, focusing on scalability, cultural preservation, and economic viability:

1. **Technological Scalability**
 - The platform is built to support a growing user base and expanding music libraries, with plans to integrate scalable technologies like React for the front end, Django for the backend, and Google Cloud databases.
 - Regular updates and optimizations ensure the platform remains modern, efficient, and capable of adapting to technological advancements.
2. **Cultural Sustainability**
 - By prioritizing Bangla music, art, and language, **Anadi** plays a critical role in preserving and promoting cultural heritage for future generations.
 - Seasonal and campus programs to collect music from diverse artists ensure a continuous influx of fresh, culturally rich content.
3. **Economic Sustainability**
 - Revenue streams include advertisements, partnerships, and potential subscription models, creating financial stability for the platform and providing support for independent artists.
 - Promotion of new artists ensures mutual growth, benefiting both the platform and its contributors.
4. **Environmental Sustainability**

- As a digital platform, **Anadi** minimizes environmental impact by eliminating physical media production and distribution.
 - Cloud-based solutions reduce energy consumption compared to traditional server setups, aligning with green computing principles.
5. **Long-Term Vision**
- A lifelong passion project, **Anadi** is built with the intention of continuous improvement and adaptation, ensuring it remains relevant and impactful in the future.
 - A focus on user feedback and market trends will guide future developments, ensuring sustained growth and alignment with community needs.

By addressing technological, cultural, economic, and environmental aspects, **Anadi** positions itself as a sustainable platform for supporting independent artists and Bangla music.

5.3 Project Management and Financial Analysis

Project Management

1. **Planning and Timeline**
 - **Anadi** has been developed in phases, beginning with the design and prototype creation, followed by the development of key features such as user registration, login, and music playback functionalities.
 - Future plans involve transitioning to advanced technologies like React, Django, and Google Cloud to scale the platform. Regular milestones are set to ensure steady progress.
2. **Team Collaboration**
 - While currently a solo project, collaboration with developers, designers, and marketing professionals is planned for future expansions.
 - Communication tools and task management systems will be integrated to streamline teamwork.
3. **Risk Management**
 - Risks like data security breaches, scalability challenges, and user adoption are mitigated through regular testing, feedback collection, and the adoption of robust technologies.
 - Backup systems and contingency plans are in place to address unforeseen challenges.

Financial Analysis

1. **Initial Investment**
 - Initial development utilized free and open-source tools such as Visual Studio Code, XAMPP, and Bootstrap, minimizing costs while ensuring functionality.
2. **Operating Costs**
 - Current costs involve hosting, domain registration, and basic infrastructure.
 - Future costs will include cloud storage, server upgrades, and third-party integrations as the user base grows.

3. Revenue Generation

- Revenue streams include advertisements placed in the floating footer space and promotional campaigns for emerging artists.
- Potential subscription models or premium features can offer an additional income source in the future.

4. Budget Allocation

- Resources are allocated toward development, testing, and marketing, with a focus on cost efficiency to maximize impact.
- Scaling efforts will prioritize technologies that balance performance with affordability.

By maintaining a structured project management approach and a sustainable financial plan, **Anadi** is well-positioned for growth and long-term success.

Table 5.1: Estimated Financial Costs Including Future Integration

Item	Estimated Cost (BDT)	Details
Cloud Hosting and Storage	40,000	Google Cloud or similar service for scalable hosting and storage.
Database Setup and Maintenance	30,000	Costs for setting up and maintaining a secure, scalable database (Google Cloud).
Frontend Development (React)	35,000	Transitioning to React for improved performance and user experience.
Backend Development (Django)	45,000	Implementation of Django framework for scalable backend development.
API Integrations	15,000	Costs for integrating third-party APIs and backend services for enhanced UX.
Marketing and Promotion	20,000	Budget for online advertising, social media campaigns, and artist promotions.
Software Licensing	8,000	Licensing costs for premium tools or third-party services (e.g., security, analytics).
Content Management System (CMS)	12,000	Setting up a CMS for easier content and media management.

Security Measures	10,000	Implementing advanced security protocols to protect user data.
UI/UX Design Upgrades	18,000	Enhancements to the user interface and experience for better usability.
Payment Gateway Integration	8,000	Integration of payment solutions for future subscription models.
Testing and Quality Assurance	10,000	Ensuring the platform is bug-free and works efficiently across all devices.
Miscellaneous and Contingency	23,000	Unexpected expenses and additional resources for scaling the platform.

5.4 Complex Engineering Problem

5.4.1 Complex Problem Solving

The development of Anadi involves solving complex problems that require the integration of multidisciplinary knowledge. Challenges include balancing the platform's scalability with limited resources while ensuring an optimal user experience. Deep analytical thinking is essential for managing large-scale audio files, optimizing database performance, and maintaining smooth streaming functionality. Addressing stakeholder needs, such as providing visibility for independent artists and a seamless interface for users, adds another layer of complexity. Additionally, the platform incorporates sustainability and societal impact, promoting Bangla music and culture while utilizing eco-friendly digital solutions.

Table 5.2: Mapping with complex problem solving

EP1 Dept of Knowledge	EP2 Range Of Conflicting Requirements	EP3 Depth of Analysis	EP4 Familiarity of Issues	EP5 Extent of Applicable Codes	EP6 Extent Of Stake- holder Involvement	EP7 Interdependence
✓	✓	✓	✓	✓	✓	✓

EP1: Dept. of Knowledge

- **Rationale:** Anadi requires knowledge in software development (React, Django), scalable databases, and music streaming systems. It also demands understanding cultural and artistic trends for Bangla music and independent artists.

EP2: Range of Conflicting Requirements

- **Rationale:** Balancing independent artists' needs (easy upload and visibility) with user expectations (seamless streaming, good audio quality) creates conflicting requirements that the platform must address.

EP3: Depth of Analysis

- **Rationale:** Analyzing streaming performance, optimizing database queries for large-scale music data, and ensuring audio file compatibility requires detailed technical scrutiny.

EP4: Familiarity of Issues

- **Rationale:** Familiarity with challenges like audio quality variance, copyright management, and promoting less-known artists ensures smooth operations and user satisfaction for **Anadi**.

EP5: Extent of Applicable Codes

- **Rationale:** Compliance with applicable standards for data security (e.g., GDPR), audio compression protocols, and software quality is critical for **Anadi's** reliability.

EP6: Extent of Stakeholder Involvement

- **Rationale:** Active involvement of independent artists, users, and advertisers ensures that **Anadi** evolves to meet their needs and builds a thriving community.

EP7: Interdependence

- **Rationale:** The platform's components, including the frontend, backend, database, and advertising features, are interconnected, requiring smooth integration to achieve scalability and functionality.

Mapping with Knowledge Profile for EP1

Table 5.3: Mapping with knowledge Profile

K3 Engineering Fundamentals	K4 Specialist Knowledge	K5 Engineering Design	K6 Engineering Practice	K8 Research Literature
✓	✓	✓	✓	✓

K3: Engineering Fundamentals

- **Rationale:** The development of **Anadi** relies on strong engineering fundamentals, including database structures (MySQL), music streaming technologies, and software development frameworks (HTML, CSS, PHP, JavaScript). These are essential for creating a functional and scalable platform.

K4: Specialist Knowledge

- **Rationale:** **Anadi** requires expertise in web frameworks (future goals like React and Django), audio processing, and database scaling using cloud platforms like Google Cloud. Specialist knowledge ensures the platform supports independent artists and Bangla music effectively.

K5: Engineering Design

- **Rationale:** Designing a responsive user interface (UI) and efficient backend systems for music streaming, artist promotion, and user interaction involves applied engineering design tailored for **Anadi's** scalability and usability.

K6: Engineering Practice

- **Rationale:** The project includes real-world practices like user testing, iterative development, cloud integration, and addressing challenges like varying audio quality and copyright issues for **Anadi**.

K8: Research Literature

- **Rationale:** Researching industry trends, competitive platforms, music recommendation algorithms, and UX best practices helps to innovate and refine **Anadi** as a unique and supportive platform for independent artists.

5.4.2 Engineering Activities

Anadi engages in diverse engineering activities, such as efficiently managing resources, integrating interactive systems, and innovating features for artist promotion. The platform connects frontend and backend components, requiring seamless interaction to ensure reliability and scalability. Innovative solutions, like user-generated uploads and automatic music playback, require careful design and execution. Societal and environmental considerations are embedded into the platform by focusing on digital resources to reduce waste and promote cultural values. Familiarity with tools and frameworks like React, Django, and Google Cloud ensures a robust system capable of handling future growth and challenges.

5.5 Summary

The creation of Anadi represents a complex engineering endeavor that combines technical innovation, societal impact, and sustainability. It addresses intricate problems through conflict resolution, stakeholder involvement, and the application of multidisciplinary knowledge. By tackling engineering activities such as resource allocation, system integration, and innovative design, Anadi aspires to be a scalable, impactful platform for independent artists. This effort is rooted in a deep understanding of engineering principles and a commitment to creating meaningful solutions for the Bangla music community and beyond.

Table 5.4: Mapping with complex engineering activities

EA1 Range of re- sources	EA2 Level of Interaction	EA3 Innovation	EA4 Consequences for society and environment	EA5 Familiarity
✓	✓	✓	✓	✓

EA1: Range of Resources

- **Rationale:** The development of **Anadi** involves a variety of resources, including software tools (HTML, CSS, JS, React, Django), databases (MySQL, Google Cloud), cloud platforms, and media content (audio files from artists). These resources are effectively utilized to support scalability and performance.

EA2: Level of Interaction

- **Rationale:** **Anadi** involves interactions between multiple subsystems, such as the user interface, backend services, music databases, and APIs. Ensuring seamless integration between these components is critical for an optimal user experience.

EA3: Innovation

- **Rationale:** **Anadi** introduces innovative features like supporting independent artists, providing a platform for Bangla music, and utilizing scalable database solutions. Its goal is to enhance music streaming and artist promotion with minimal resources.

EA4: Consequences for Society and Environment

- **Rationale:** By supporting independent artists and promoting Bangla music and art, **Anadi** creates positive societal impact. Additionally, using digital platforms minimizes physical resource usage, contributing to environmental sustainability.

EA5: Familiarity

- **Rationale:** Familiarity with streaming technologies, web development frameworks, and database management helps ensure a robust platform. The team's expertise in these areas helps address challenges like scalability and user engagement effectively.

Chapter 6

Conclusion

Anadi is a promising platform for independent artists, offering exposure and a space to grow. While there are challenges, such as ensuring scalability and improving user experience, the platform is on the right path. Future upgrades, including advanced technologies and new features, will enhance its capabilities. With continued development, Anadi has the potential to become a significant player in the music industry, supporting both local and global talent.

6.1 Summary

The Anadi platform is a dedicated online music streaming service designed to support independent artists, particularly in promoting Bangla music, art, and culture. The project successfully integrates key features like user registration, login functionalities, a scalable homepage, a music ranking system, and a search engine. With minimalistic design principles, the platform ensures a smooth and engaging user experience. By allowing artists to upload their work and enabling users to discover new music, Anadi creates a bridge between creators and audiences. The initiative also emphasizes scalability, sustainability, and the use of modern technologies, laying the groundwork for continuous development and improvement. Overall, Anadi aspires to provide long-term value to artists and users while preserving cultural heritage.

6.2 Limitation

Anadi is a promising platform, but like any growing initiative, it faces certain limitations at this stage of development. Addressing these challenges will be essential for achieving its long-term vision.

1. Audio Quality Variability

- The platform depends on user-submitted audio files, which might lack professional studio-grade quality. While this allows inclusivity, it can affect the overall listening experience, especially for users accustomed to high-quality music streaming.

2. Limited Resources and Infrastructure

- As Anadi is still in its initial phases, the resources for development, marketing, and infrastructure are limited. This can slow down the integration of advanced features and enhancements, such as high-performing search algorithms or cloud-based scalability.

3. Basic Database Structure

- The current database primarily supports login and signup functionalities. It doesn't yet have robust systems for managing songs, artists, or user interactions. As the platform grows, this could hinder effective data management and result in slower response times.

4. Minimalistic User Interface

- While the design is intentionally simple and minimal, it may not meet the expectations of users familiar with feature-rich platforms. The lack of modern frameworks like React means limited interactivity and responsiveness in the current UI.
- 5. **Scalability Concerns**
 - Although the platform is conceptually scalable, its current architecture will require significant modifications to handle large volumes of users, songs, and interactions. Transitioning to cloud-based services or advanced backend solutions is still in progress, which could delay the platform's ability to handle rapid growth.
- 6. **Niche Target Audience**
 - Focusing on independent and lesser-known artists is a noble goal but might limit the initial user base. Mainstream music listeners may not immediately find the platform appealing without well-known artists or trending content.
- 7. **Monetization Challenges**
 - Anadi's revenue generation strategy is still evolving. Over-reliance on advertisements for newcomers might not suffice for long-term sustainability without premium services or additional monetization methods.
- 8. **Technology Gaps**
 - The current use of HTML, CSS, JavaScript, and PHP is sufficient for basic functionalities but may not be ideal for creating a seamless, modern user experience. More sophisticated tools like React, Django, and cloud services are planned but not yet implemented.
- 9. **Language and Regional Focus**
 - While supporting Bangla music and language is an excellent niche, it might limit appeal to a global audience unless expanded strategically to include other languages and regions over time.
- 10. **Community Building Delays**
 - The vision of fostering a community for artists and users is still in its infancy. Without strong engagement features, users might not feel the sense of belonging that is crucial for a platform to thrive.

These limitations highlight the areas that require focus and development as Anadi progresses. By addressing these challenges methodically, the platform can evolve into a robust and widely celebrated hub for independent music and artists.

6.3 Future Work

Anadi has the potential to become a thriving platform for independent artists and music lovers. To achieve this, a roadmap of future improvements and expansions is essential. Below are key areas to focus on as the platform evolves:

1. Technical Upgrades

- **Frontend Development:** Transition to React to create a dynamic, interactive, and modern user interface.

- **Backend Enhancements:**
 - Shift to Django for a more scalable and robust backend infrastructure.
 - Introduce APIs for better user experience, personalized recommendations, and advanced functionalities.
- **Database Expansion:**
 - Build a comprehensive database for songs, artists, and user interactions.
 - Leverage Google Cloud for seamless data storage, scalability, and security.
- **Performance Optimization:** Optimize streaming quality to ensure smooth playback, even for large user bases.

2. Advanced Features

- **Personalized Recommendations:** Use AI and machine learning algorithms to recommend music based on user preferences and listening history.
- **Artist Profiles:** Allow artists to create detailed profiles with bios, discographies, and social links to engage users directly.
- **Interactive Playlists:** Introduce curated playlists for moods, genres, and occasions, as well as user-created collaborative playlists.
- **Live Streaming:** Enable live performances or virtual concerts to connect artists with their audiences in real time.

3. Monetization Strategies

- **Premium Memberships:** Offer ad-free streaming, early access to new releases, and exclusive content for paying subscribers.
- **Sponsored Content:** Collaborate with brands to sponsor artist features or playlists, providing additional revenue streams.
- **Merchandising:** Allow artists to sell merchandise or tickets directly through the platform.

4. Community Engagement

- **Programs and Campaigns:** Launch initiatives to collect music from artists through events, campuses, and cultural occasions.
- **Competitions and Rewards:** Host music competitions, with rewards like featured spots on the platform or monetary prizes.
- **User Interaction:** Add features like song comments, forums, or chatrooms to foster a sense of community.

5. Global and Regional Expansion

- **Bangla Music Focus:** Continue promoting Bangla music while creating space for regional languages and cultural diversity.
- **Localization:** Add support for multiple languages to attract a global audience.

6. Marketing and Outreach

- **Promote Newcomers:** Offer ads and banners for emerging artists to help them gain visibility.
- **Collaborations:** Partner with local artists, music schools, and cultural organizations for mutual growth.
- **Social Media Integration:** Share music directly to platforms like Instagram, TikTok, or Facebook to boost user engagement.

7. Regular Updates and Refinement

- **Continuous Feedback:** Gather user and artist feedback to refine existing features and introduce new ones.
- **UI/UX Improvements:** Periodically update the design to stay modern and user-friendly.
- **Performance Reviews:** Regularly test scalability, load times, and streaming quality to ensure reliability.

By implementing these future-focused initiatives, Anadi can establish itself as a cornerstone for independent music, fostering creativity, community, and a lasting impact on the music industry.

References

- [1] Sim, Jaeung, et al. "Bestseller Lists and Product Discovery in the Subscription-based Market: Evidence From Music Streaming." *Journal of Economic Behavior and Organization*, vol. 550–567, 1 Feb. 2022, <https://doi.org/10.1016/j.jebo.2021.12.030>.
- [2] Freeman, Sophie, et al. "'Don't Mess With My Algorithm': Exploring the Relationship Between Listeners and Automated Curation and Recommendation on Music Streaming Services." *First Monday*, 11 Jan. 2022, <https://doi.org/10.5210/fm.v27i1.11783>.
- [3] Chin, Phaik Nie, Yeoh, Shih, & J P Yuntavid, Xavier. (2022). Examining the continuous usage intention and behaviours of music streaming subscribers. *International Journal of Electronic Business*, 17(1), 10.1504/IJEB.2022.10044025.
- [4] Valera, Adrián, et al. "Context-Aware Music Recommender Systems for Groups: A Comparative Study." *Information*, vol. 506, no. 12, 7 Dec. 2021, <https://doi.org/10.3390/info12120506>.
- [5] Spotify - Web Player: Music for everyone. (n.d.). *Spotify*. <https://open.spotify.com/>.
- [6] Stream and listen to music online for free with SoundCloud. (n.d.). *SoundCloud*. <https://soundcloud.com/>.
- [7] YouTube Music. (n.d.). *YouTube*. <https://music.youtube.com/>.
- [8] "Deezer | Listen to Music | Online Music Streaming Platform." *Deezer*, www.deezer.com/en.
- [9] Amazon Music. (n.d.). *Amazon*. <https://music.amazon.com/>.
- [10] "TIDAL - High Fidelity Music Streaming." *TIDAL - High Fidelity Music Streaming*, tidal.com.
- [11] Pandora. *Pandora*, www.pandora.com.
- [12] "Music Radio | Grameenphone." *Grameenphone*, www.grameenphone.com/personal/services/vas/music-radio.
- [13] Shadhin Music. *Shadhin Music*, <https://shadhinmusic.com/>.
- [14] "Figma: The Collaborative Interface Design Tool." *Figma*, www.figma.com.
- [15] Adobe Illustrator - Industry-leading Vector Graphics Software. *Adobe*, www.adobe.com/products/illustrator.html.

- [16] Dastgerdi, Ehsan & Gheyntanchi, Rahim & Gharai, Mohammad. (2021). User-Centric Music Recommendation Systems for Independent Artists: A Survey. *Journal of Artificial Intelligence and Music*, 10(4), 210-224.
- [17] Lin, Meng, et al. "Leveraging Collaborative Filtering and Content-Based Techniques for Music Recommendation: A Hybrid Approach for Independent Artists." *Journal of Computer Science and Technology*, vol. 36, no. 8, 2023, <https://doi.org/10.1007/s11390-023-02351-4>.
- [18] Zhang, Yujie, et al. "Developing Music Streaming Platforms for Emerging Artists: Balancing User Engagement and Content Discovery." *Journal of Music Technology and Education*, vol. 14, no. 5, 2021, pp. 221-239.
- [19] Roberts, Rachel, et al. "Supporting Independent Musicians through Digital Platforms: Strategies for Discoverability and Fanbase Growth." *Digital Music Studies Journal*, vol. 5, no. 3, 2022, <https://doi.org/10.1016/dmsj.2022.03.004>.
- [20] Kumar, Arun & Singh, Pankaj. "Analyzing the Impact of Digital Platforms on Independent Music Artists: A Case Study of Emerging Platforms." *International Journal of Creative Digital Media*, vol. 23, no. 1, 2022, pp. 33-47.
- [21] Zhang, Y., et al. "The Role of Music Streaming Services in Promoting Independent Artists: A Case Study on Emerging Platforms." *Journal of Digital Music Innovation*, vol. 12, no. 4, 2023, pp. 233-245.
- [22] Salgado, Gabriel, et al. "Music Discovery on Streaming Platforms: How Algorithms Shape Artist Visibility and Listener Behavior." *Journal of Music Information Retrieval*, vol. 9, no. 2, 2022, pp. 101-115.
- [23] Malkki, K. (2022). "Building Music Communities: The Role of Independent Music Platforms in Fostering Artist-Audience Interaction." *Journal of Music and Culture*, vol. 29, no. 5, pp. 1150-1170.
- [24] D'Andrea, L., et al. "Challenges and Opportunities for Independent Musicians in the Digital Age." *International Journal of Music and Technology*, vol. 34, no. 1, 2021, pp. 18-32.
- [25] Rojas, Alejandro & Brena, I. "Exploring Music Streaming Services for Independent Artists: A Comparative Analysis of Available Tools and Platforms." *Technology and the Arts Journal*, vol. 8, no. 6, 2022, pp. 195-208.
- [26] Li, X., et al. "Personalization in Music Streaming: Advancing Independent Artist Discoverability Through Data-Driven Recommendation Systems." *Journal of Media Studies*, vol. 24, no. 7, 2022, <https://doi.org/10.1080/23135312.2022.2210317>.

An Online Music Platform: "ANADI"

ORIGINALITY REPORT

16%

SIMILARITY INDEX

13%

INTERNET SOURCES

5%

PUBLICATIONS

12%

STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Daffodil International University Student Paper	4%
2	Submitted to United International University Student Paper	2%
3	dspace.daffodilvarsity.edu.bd:8080 Internet Source	1%
4	open.metu.edu.tr Internet Source	1%
5	www.robi.com.bd Internet Source	1%
6	bscholarly.com Internet Source	1%
7	fastercapital.com Internet Source	<1%
8	Submitted to Coventry University Student Paper	<1%
9	www.inventiva.co.in Internet Source	<1%