DESIGN AND DEVELOPMENT OF A NEWS PORTAL FOR DIU

BY

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

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APPROVAL

This Project titled **"Design and Development of a News Portal for DIU"**, submitted by Md. Hafizur Rahman, ID No: 151-15-5412 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 6 December, 2019.

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DECLARATION

I hereby declare that, this project has been done by me under the supervision of **Nusrat Jahan,** Lecturer, Department of Computer Science and Engineering, Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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ABSTRACT

The purpose of the "Design and Development of a News Portal for DIU" is to gather all the news of Daffodil International University in a single place so that students can easily find a specific news or a specific category of news without spending lots of time by searching manually. As this system is online based, so valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. The required software and hardware are easily available and easy to work with. Online news portal as described above, can lead to error free, secure, reliable and fast management system. Although Daffodil International University has their own website where they store all information including news, but user may distract from his goal when he/she finds a large number of sections provided by the university. It can assist the students to concentrate on their other activities rather to concentrate on the other activities. Thus it will help organization in better utilization of resources. The organization can maintain computerized records without redundant entries. That means that one need not be distracted by information that is not relevant, while being able to reach the information. The aim is to make a specific system that provides only news of the university by the help of computerized equipment and full-fledged computer software, fulfilling their requirements. Basically the project describes how to manage for good performance and better services for the students and teachers.

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TABLE OF CONTENTS

CONTENTS	PAGE
Approval	ii
Declaration	iii
Acknowledgements	iv
Abstract	v
List of Figures	viii
List of Tables	x
CHAPTER	
CHAPTER 1: INTRODUCTION	**1-3**
1.1 Introduction	1
1.2 Motivation	1
1.3 Objectives	2
1.4 Expected Outcome	2
1.5 Report Layout	3
CHAPTER 2: BACKGROUND	**4-5**
2.1 Introduction	4
2.2 Related Works	4
2.3 Comparative Studies	5
2.4 Scope of the Problem	5
2.5 Challenges	5
CHAPTER 3: REQUIREMENT SPECIFICATION	**6-17**
3.1: Business Process Modeling	6
3.2: Requirement Collection and Analysis	6

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3.3: Use Case Modeling and Description 10

3.4: UML Diagram 15

3.5: Design Requirements 16

CHAPTER 4: DESIGN SPECIFICATION 18-20

4.1: Front-end Design 18

4.2: Back-end Design 18

4.3: Interaction Design and UX 18

4.4: Implement Requirements 19

CHAPTER 5: IMPLEMENTATION AND TESTING 21-34

5.1: Implementation of Database 21

5.2: Implementation of Front-end Design 21

5.3: Implementation of Interactions 32

5.4: Testing Implementation 32

5.5: Test Results and Reports 32

CHAPTER 6: CONCLUSION AND FUTURE SCOPE 35

6.1: Discussion and Conclusion 35

6.2: Scope for Further Development 35

REFERENCES 36

APPENDIX 37

Appendix A: Project Reflection 37

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LIST OF FIGURES

FIGURES	PAGE NO
Figure 3.1.1: Business Process Modeling	6
Figure 3.2.1: Software Development Life Cycle	7
Figure 3.2.2: Flow Chart	8
Figure 3.2.3: Data Flow Diagram	9
Figure 3.2.4: ER Diagram	10
Figure 3.3.1: Use Case Modeling for User	12
Figure 3.3.2: Use Case Modeling for Admin	14
Figure 3.3.3: Use Case Diagram	15
Figure 3.4.1: UML Diagram	16
Figure 3.5.1: Architecture Design	17
Figure 5.1.1: Screenshot of Database Table	21
Figure 5.2.1: Screenshot of the Homepage	22
Figure 5.2.2: Screenshot of the Admin Panel Login	23
Figure 5.2.3: Screenshot of Admin Dashboard	23
Figure 5.2.4: Screenshot of Add Category	24
Figure 5.2.5: Screenshot of Manage Category	24
Figure 5.2.6: Screenshot of Add Sub-Category	25
Figure 5.2.7: Screenshot of Manage Sub-Category	25
Figure 5.2.8: Screenshot of Add Post	26
Figure 5.2.9: Screenshot of Manage Post	26
Figure 5.2.10: Screenshot of Trash Post	27
Figure 5.2.11: Screenshot of About Us	27
Figure 5.2.12: Screenshot of Contact Us	28

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Figure 5.2.13: Screenshot of Unapproved Comments 28
Figure 5.2.14: Screenshot of Approved Comments 29
Figure 5.2.15: Screenshot of Change Password 29
Figure 5.2.16: Screenshot of the User Homepage 30
Figure 5.2.17: Screenshot of User Comment 30
Figure 5.2.18: Screenshot of Search Bar 31
Figure 5.2.19: Screenshot of eNewspaper 31
Figure 5.2.20: Screenshot of eMagazine 32
Figure A.1: Project Development step by step 37

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LIST OF TABLES

TABLES	PAGE NO
Table 3.3.1: Use Case Description for User	11
Table 3.3.2: Use Case Description for Admin	13
Table 5.4.1: Testing Implementation	33
Table 5.5.1: Benefits of Usability Testing	34

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CHAPTER 1
INTRODUCTION

1.1 Introduction

After the invention of internet, the whole world is focusing to make everything digital. Manual systems are entering into digital day by day. News is important for a lot of reasons for society, organization, country or even the world.

At present info is one the foremost valuable resource of this world. We acquire knowledge about recent incident and event through news. By online news portal we can gather those information quicker. Most of the works depends on web application. For this reason, anytime, anywhere, anyone will access web site by internet at low value and that we will realize our expected and most updated info from website.

Online news portal is already being used by different organizations. Organizations perform a lot of tasks. Some of the tasks are very important for people or other organizations or country that's why the information should be shared to all kind of people and this type of task is done through news portals.

By using DIU News Portal users can read up to date news of the clubs that are formed within the university such as: DIU CPC, DIU NLP, Debating club, Cultural club, Souhardo Foundation and so on. Daffodil International University is one of the leading universities in Bangladesh and it is improving everyday by advancing its sectors. If DIU uses a separate news portal for news of the University then there will be added a new dimension.

1.2 Motivation

The main aim of my project is to make an online news portal that is only useful for the members (student, teacher and staff) of Daffodil International University. This news portal contains all the updated news of the university. There are different organizations, clubs and groups within the university and they perform regularly. Their activities are shared through this portal. Users can browse this portal to read news and they can share their own opinion by comments. Admin can manage the portal by adding news and removing news. Admin

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has the ability to approve or disapprove user comments. Two different sections eNewspaper and eMagazine are added so that users can visit to national and international daily paper and magazine from this portal.

1.3 Objectives

The objective of this project is to develop an Online News Portal for Daffodil International University that can inform the users:

- The objective of this project is to provide the daily activities of the University
- This portal provides news of seminars and programs held by DIU.
- This portal also provides all the activities of clubs, groups and significant tasks done by individuals.
- Anytime, anywhere, anyone of DIU can know about the news or information by internet at low cost (low cost means that to buy the internet that is needed to access the portal).
- It provides facility dynamically.
- To add any new information without any complexity (For Admin).
- From this portal users can get all news at one place without any hesitation.

1.4 Expected Outcome

I expect the outcome from this project is completely right and specific. Users will get all the facilities of news portal. Homepage of this project contains some options which user need to follow. Users do not need to log in. They just need to follow the instruction to enter into the main portal. This project allows the users to read news and share their own opinions or suggestions through comments. Administrator mode is fully restricted. Admin should login with username and password. He can add categories, remove categories, add subcategory, remove subcategory, add news, delete news etc. He also has the ability to approve or disapprove user comments. Only approved comments will be shown below the news. Admin has the ability to manage all the tasks of this news portal. Users do not need to log in. They just need to follow the instruction to enter into the main portal. This project provides convenience to users who are looking for all news of the university.

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1.5 Report Layout

In this report, I tried to show a complete overview of my project work, related work to this project and terminologies. Actually a report contains pictures, contents or information field that are used to describe the project.

Discussion on Chapter 1-6:

- In 'Chapter 1' I have discussed about the motivation, objectives and expected outcome of the project.
- In 'Chapter 2' I have described the challenges and problems that I faced to develop the project.
- In the next chapter 'Chapter 3' I have discussed about Requirement Specification which deals with different modeling concepts such as Business Process Modeling (BPM), Use Case Modeling and Logical Data Model.
- The following stage describes about whole development and testing process and this process is described in next two chapters in 'Chapter 4 and Chapter 5'
- And finally, in 'Chapter 6' I have had a little discussion on future scopes of this project and conclusion part of the project.

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CHAPTER 2
BACKGROUND

2.1 Introduction

Nowadays, information needs are the main requirement for the people. Along with the development of Internet technology, information sharing becomes more quickly with very broad coverage with the presence of online newspapers [1]. In this era world totally relays upon the electronic media for day to day life and when I am talking about a leading university of Bangladesh then it is really essential to have its own news portal. To know the news all events is somewhat difficult by searching manually from university website or help desk. Sometimes students fail to know the specific news in want of proper direction. University's main website contains important news only and they think it's unnecessary to provide less important news. But in some cases unnecessary news may be very useful to users especially students. For example: if a student or group of students are doing well nationally or internationally that is provided as news in University's main website. But students who are doing well within the university such as DIU CPC arranged a contest and Akhter Hossain did outstanding by solving 10 out of 10 problems, Ayman Sadiq who could not speak well has done extraordinary in DIU Debating club etc. These type of news may influence students to go ahead which is an untold goal of University. This news portal is designed to put its user close to University.

2.2 Related Works

Actually there are a lot of ways to gather information of an event and for this users always need to keep connected with every event or organizations that arrange events. I found no straight way from where collecting information is easier and user friendly.

It's a matter of sorrow that no private university in Bangladesh has separate website for news portal. They provide a subcategory for news in their main website. Among the public universities of our country, only Dhaka University has a separate news portal named "Dhaka Bisyabiddaloy Barta". DIU_News_Portal is a web based project where users can easily browse the news and find a specific news by searching without any difficulty.

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2.3 Comparative Studies

I have developed this project to use it as a complete web-based solution to reach the system at professional level. And for this purpose, I have researched several projects related to my project. In my research, I have found a large number of general projects on news portal which is just based on newspaper not specific on university purpose. Stanford University, Dhaka University and another university of Malaysia named UKM uses their separate news portal [2]. I also want to add that no private university of Bangladesh uses news portal just for news. I believe this project will be beneficial for the users because this news portal gives them all the news of the university and users can keep them updated by getting the latest events and activities of the university.

2.4 Scope of the Problem

The core concept of this project is to provide a web based news portal that will provide it's users with news of all sectors of the university. In this project, students are focused as target users. They will face no more difficulty to find information and activities. This will reduce time and harassment because of easy access to the portal and easy to use.

This portal is open for all as user so that they can enter into the portal and see the progress of the university. For security, I have restricted the comments section. Everyone can comment on news but comments approved by admin will be shown in portal. There is no chance of data loss because of strong backup and reliable storage in the database section.

2.5 Challenges

Where there is possibility, there is challenge. While I have developed this project I faced some difficulties. This web based news portal should be maintained by only one admin. There may be more than one person to maintain it but they need to share one username and password. I tried to make several admin sector for several categories but this time this feature is not available. Maybe in next update this facility will be provided.

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CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Business Process Modeling

A software requirements specification (SRS) is a document that explains the nature of a project, software, or application. In short, an SRS document is a project guide prepared prior to the start of a project / application, also known as SRS report [3]. Software documents are virtually any project, software, or application report.

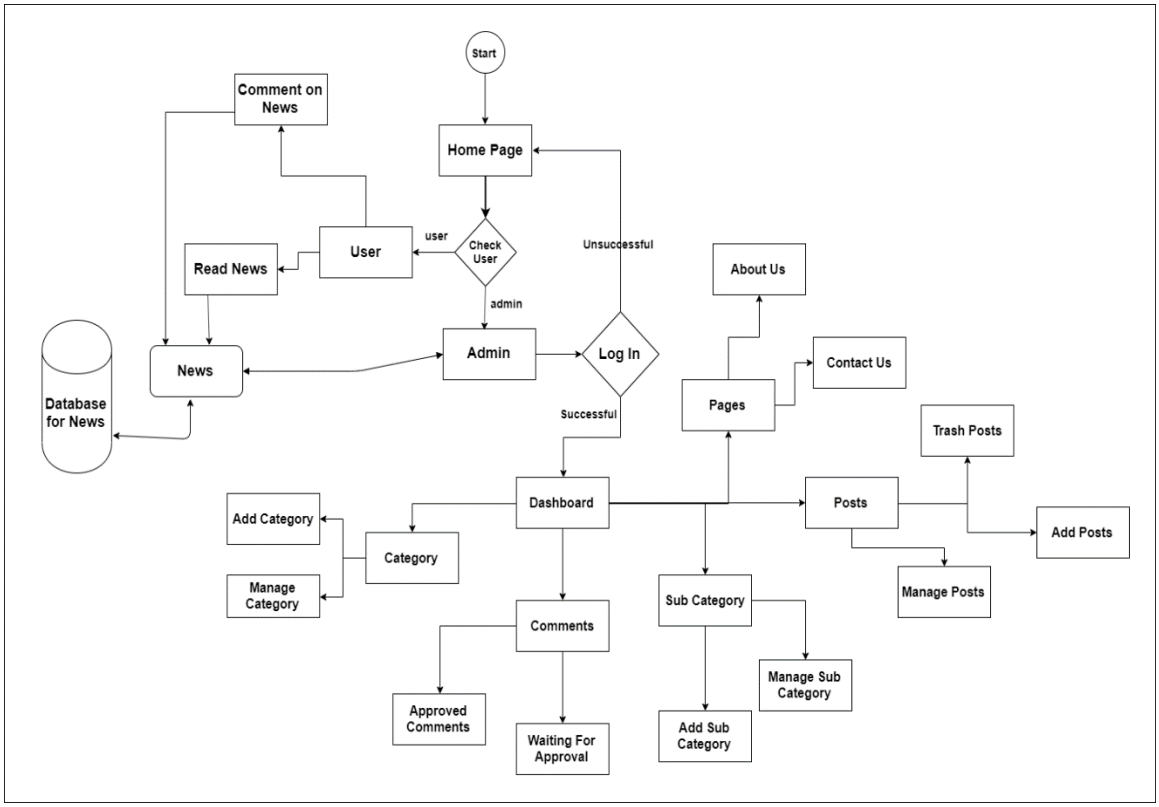

Figure 3.1.1: Business Process Modeling

3.2 Requirement Collection and Analysis

If your company needs a new program, you already know what the new program wants. This lesson discusses the purpose and importance of collecting and analyzing needs during the life of software development. SDLC is the abbreviation of software development life cycle and the process used as the basis for software development. Project managers and

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commercial organizations use SDLC as a template to complete each phase of the software development [4]. Each step is called the SDLC phase. The first phase of the SDLC is the collection and analysis of requirements [5]. This may be useful when a developer wants to develop it in the future. For this reason, I collected my project requirements before starting the development task.

SOFTWARE DEVELOPMENT LIFE CYCLE (AGILE MODEL)

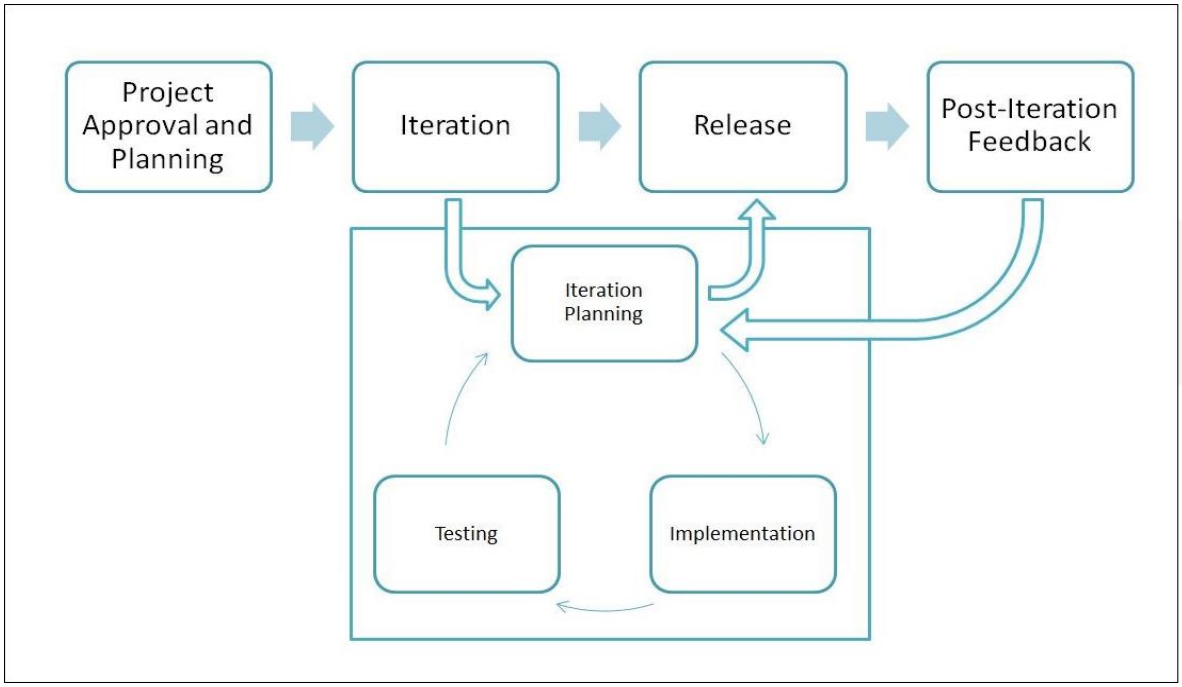

Figure 3.2.1: Software Development Life Cycle (Agile Model)

Agile is the most popular version of SDLC at the present time [4]. By dividing the product into cycles, the agile model provides a viable product quickly and is considered a very realistic development approach. The Agile thought process had started early in the software development and started becoming popular with time due to its flexibility and adaptability. The most popular Agile methods include Rational Unified Process (1994), Scrum (1995), Crystal Clear, Extreme Programming (1996), Adaptive Software Development, Feature Driven Development, and Dynamic Systems Development Method (DSDM) (1995) [6]. Agile model believes that every project needs to be handled differently and the existing methods need to be tailored to best suit the project requirements. In Agile, the tasks are

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divided to time boxes (small time frames) to deliver specific features for a release. Iterative approach is taken and working software build is delivered after each iteration. Each build is incremental in terms of features; the final build holds all the features required by the customer [5]. The model creates a continuous version. Each version changes gradually over previous versions. The product is tested at each iteration. As I am new in this sector, so I need to change my decision for several times. That's why I decided to select agile as development model.

FLOW CHART

A flowchart is a diagram that shows the steps in a process. Flowcharts are often used for training, documenting and planning. They can also be useful for decision making. They often use arrows to illustrate how one step leads to another [7]. Use a flowchart when you want to explain the steps in a process with someone else – such as someone that you're training in for a job. They're useful in presentations and reports The Flow Chart of my system is given here:

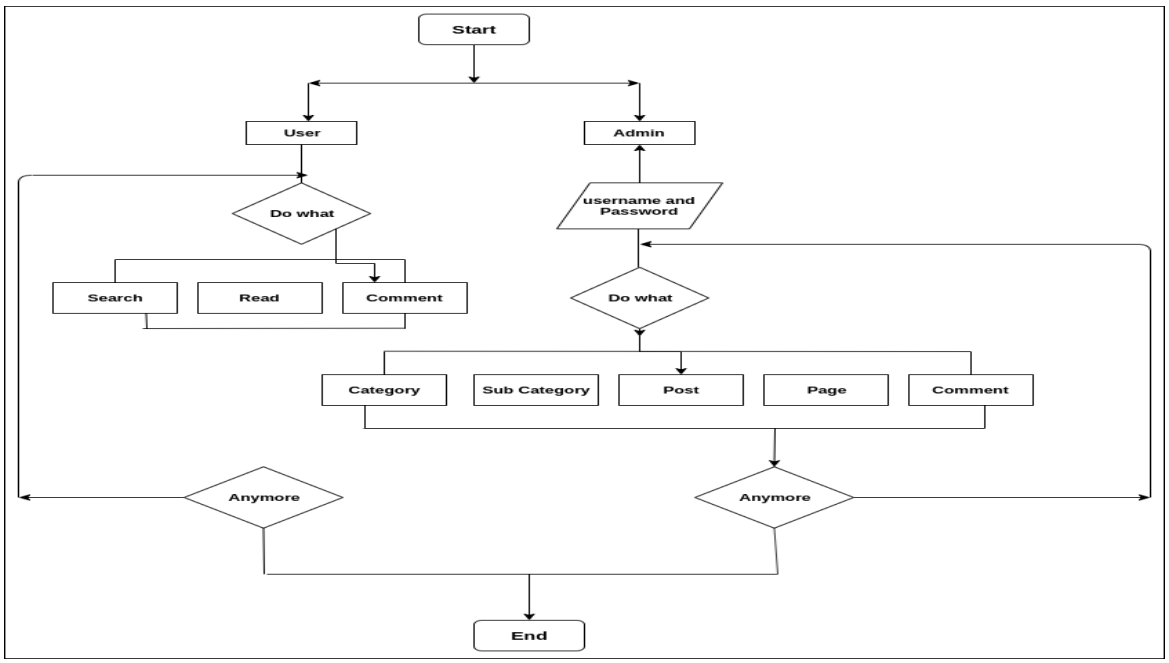

Figure 3.2.2: Flow chart of diu news portal

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DATAFLOW DIAGRAM

Data flow diagrams, also known as DFD, are used to track the data flow from the business information system. DFD describes the process used by the system to transfer records to save files and generate reports. Data flow diagrams can be subdivided into logical and physical [4].

The data flow logic describes the data flow in a system to perform certain business functions. The physical data flow diagram illustrates the implementation of the logical data flow.

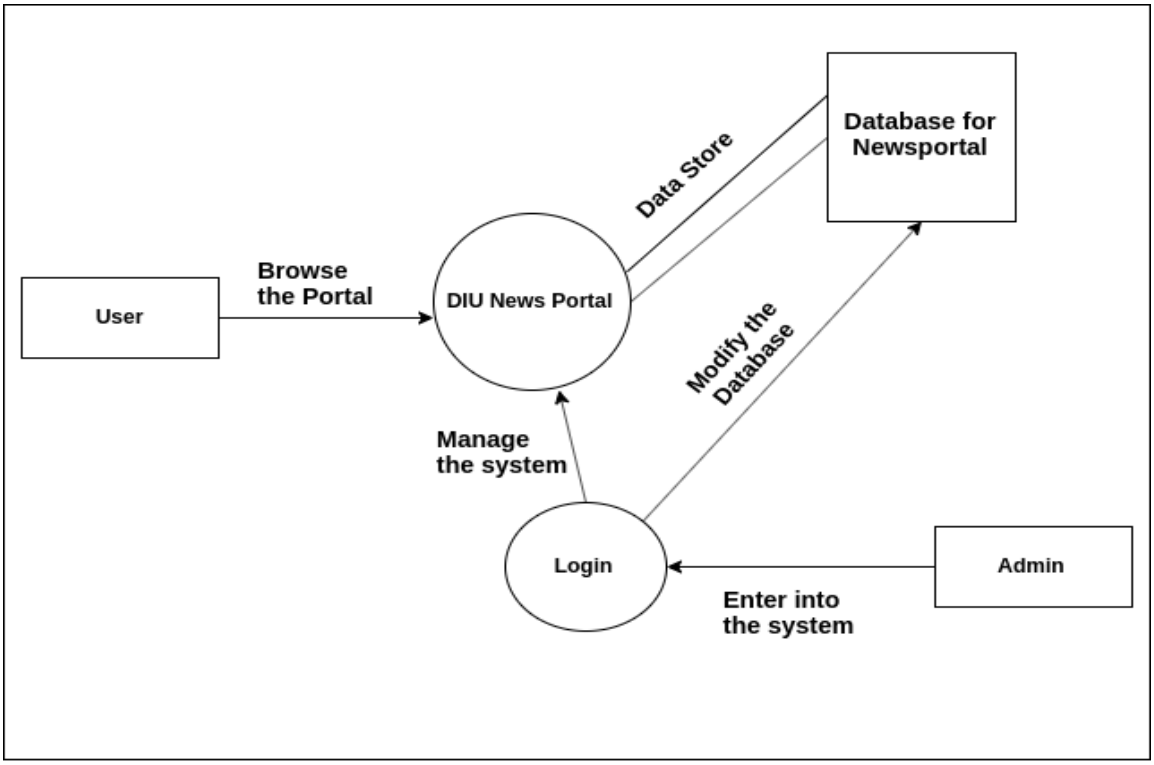

Figure 3.2.3: Data Flow Diagram for DIU News Portal

This figure is drawn with an online software named draw.io. [8]. This tool is really nice to draw any figure you need.

ENTITY RELATIONSHIP DIAGRAM

The Object Relationship Diagram (ERD) shows the relationships between a set of objects stored in a database. In this regard, objects are data components. Object collections consist

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of a collection of similar objects. They can have properties that define their properties. By defining entities, their properties and relationships, the ER diagrams reflect the logical structure of the database [3]. ER images are used with the design of the program database. There are mainly three elements that represent ER Diagram. They are:

- Entity
- Relationship
- Attribute

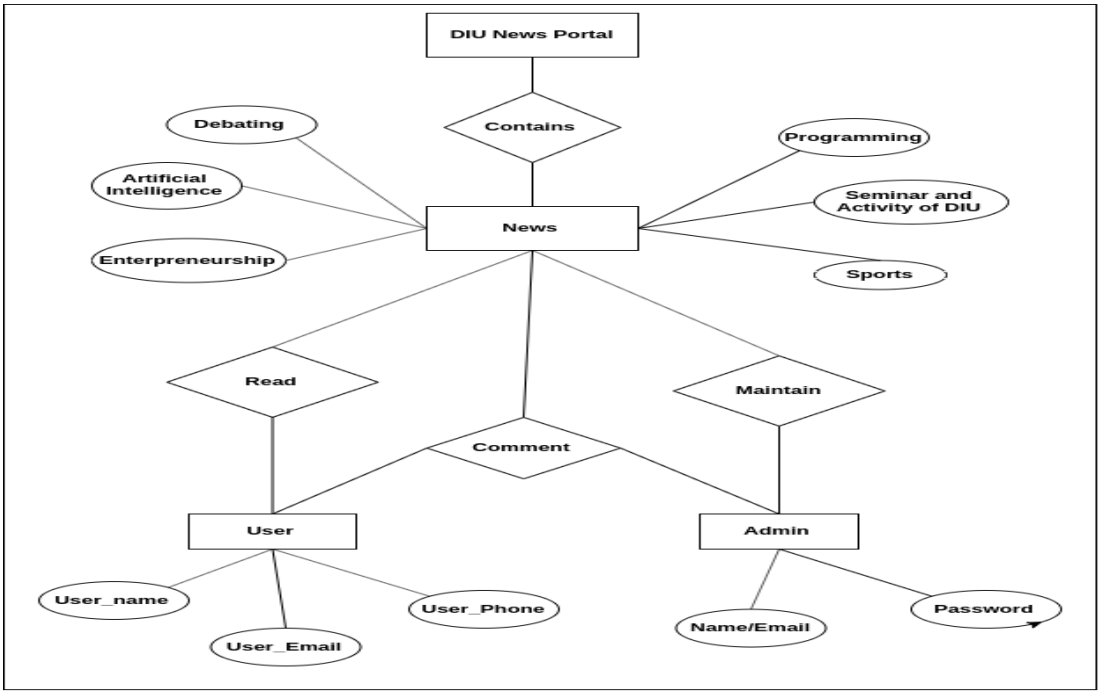

Figure 3.2.4: ER Diagram of DIU News Portal

3.3 Use Case Modeling and Description

Use case modeling provides us graphical interaction between the users of the required system management. A use-case model is a model of how different types of users interact with the system to solve a problem. As such, it describes the goals of the users, the interactions between the users and the system, and the required behavior of the system in satisfying these goals [6]. The use-case model serves as a unifying thread throughout system development. It is used as the primary specification of the functional requirements for the system, as the basis for analysis and design, as an input to iteration planning, as the

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basis of defining test cases and as the basis for user documentation Here it is shown graphically how different users communicate with each other with a view to acquiring the system's goal [6]. It describes the role of user, interaction between users and expected system behavior.

In any project, actor plays the important role. There are two actors in my project. They are:

- User
- Admin

USE CASE FOR USER

Users are the only customer for this system. This system is user friendly and provides easy access. There is no need of login to browse the news portal.

When they access into the news portal they can find all news what they can browse and read. If a user needs a specific news, he can search the news from search bar. User can also find news from news categories. If user thinks that he has suggestion or appreciation for the news, then he can comment on the news. There are two separate section for user to read online newspapers named ePaper and online Magazines named eMagazine. The following table shows the use case for user.

Table 3.3.1: Use Case Description for User

Use Case Name:	User
Actor:	Admin
Precondition:	None
Primary Path:	Enter into the Homepage Click on “Browse as User”
Exceptional Path	None

The use case is made up of a set of possible sequences of interactions between systems and users in a particular environment and related to a particular goal. It consists of a group of

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elements (for example, classes and interfaces) that can be used together in a way that will have an effect larger than the sum of the separate elements combined. A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. The use case is made up of a set of possible sequences of interactions

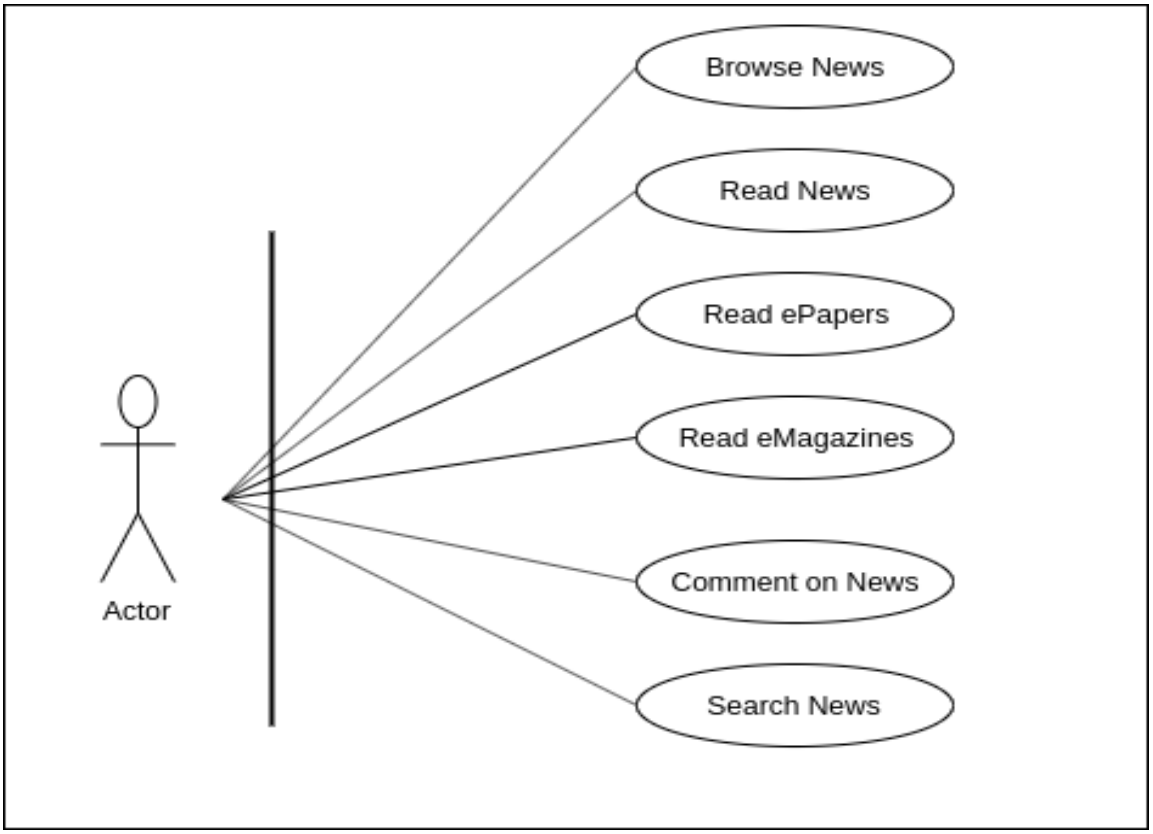

Figure 3.3.1: Use Case Modeling For User

between systems and users in a particular environment and related to a particular goal. It consists of a group of elements (for example, classes and interfaces) that can be used together in a way that will have an effect larger than the sum of the separate elements combined. The use case should contain all system activities that have significance to the users. But there are traps you should avoid, says expert Karl E. Wiegers[2]. Figure for the table is given below:

USE CASE MODELING FOR ADMIN

This system will be maintained by admin. So the main works are embedded here. Admin must need to login to enter into the system. Then he can observe total categories,

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subcategories, total news etc from the dashboard. Only he can add news, categories, sub-categories and also maintain these sections. He also has the ability to approve comments made by the users. A use case can be thought of as a collection of possible scenarios related to a particular goal, indeed, the use case and goal are sometimes considered to be synonymous. Use cases can be employed during several stages of software development, such as planning system requirements, validating design, testing software, and creating an outline for online help and user manuals. Then he can observe total categories, subcategories, total news etc from the dashboard. A use case can be thought of as a collection of possible scenarios related to a particular goal.

Table 3.3.2: Use Case Description for Admin

Use case name:	Admin
Actor:	User
Precondition:	Login
Primary Path:	Enter username or email Enter Password Click on “Login” button
Exceptional Path:	Username or email is incorrect Password is incorrect

He also has the ability to approve comments made by the users. A use case can be thought of as a collection of possible scenarios related to a particular goal, indeed, the use case and goal are sometimes considered to be synonymous. Here goes the figure for admin panel:

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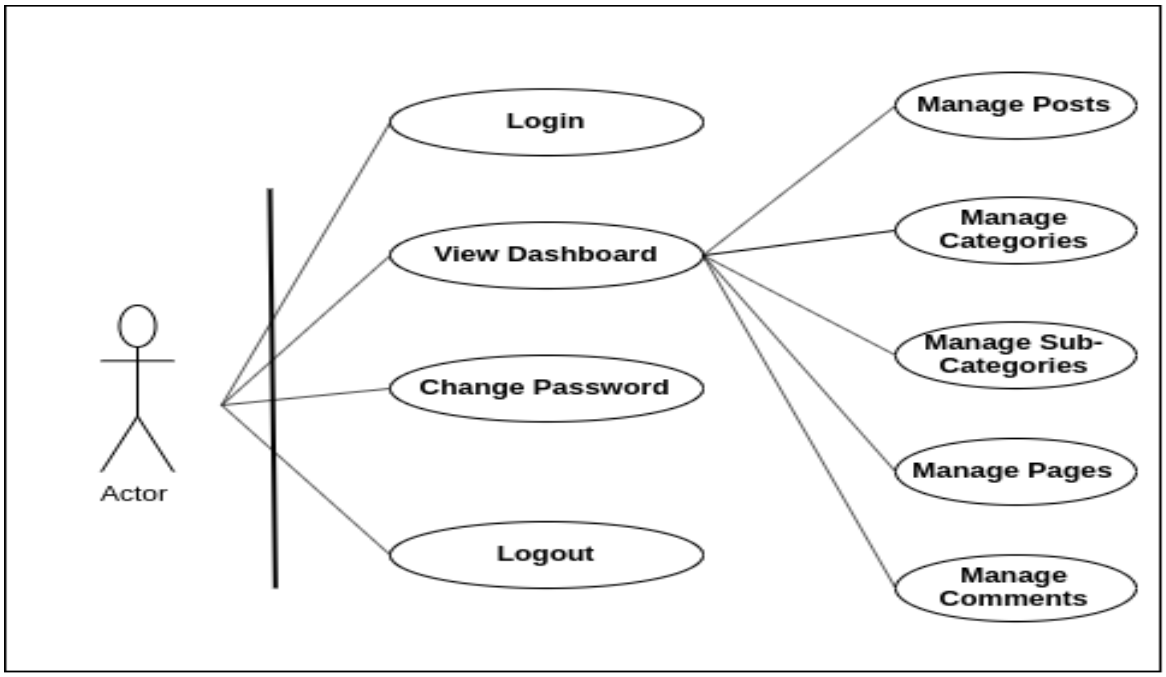

Figure 3.3.2: Use Case Modeling For Admin

USE CASE DESCRIPTION

Then he can observe total categories, subcategories, total news etc from the dashboard. Only he can add news, categories, sub-categories and also maintain these sections. He also has the ability to approve comments made by the users. A use case can be thought of as a collection of possible scenarios related to a particular goal, indeed, the use case and goal are sometimes considered to be synonymous. Use cases can be employed during several stages of software development, such as planning system requirements, validating design, testing software, and creating an outline for online help and user manuals. Then he can observe total categories, subcategories, total news etc from the dashboard. A use case can be thought of as a collection of possible scenarios related to a particular goal. A use case can be thought of as a collection of possible scenarios related to a particular goal, indeed, the use case and goal are sometimes considered to be synonymous. Use cases can be employed during several stages of software development, such as planning system requirements, validating design.

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This section contains the combination of above single part of both user and admin. Previous parts have already described their own functionality with figure and table that's why I am not going to describe them again.

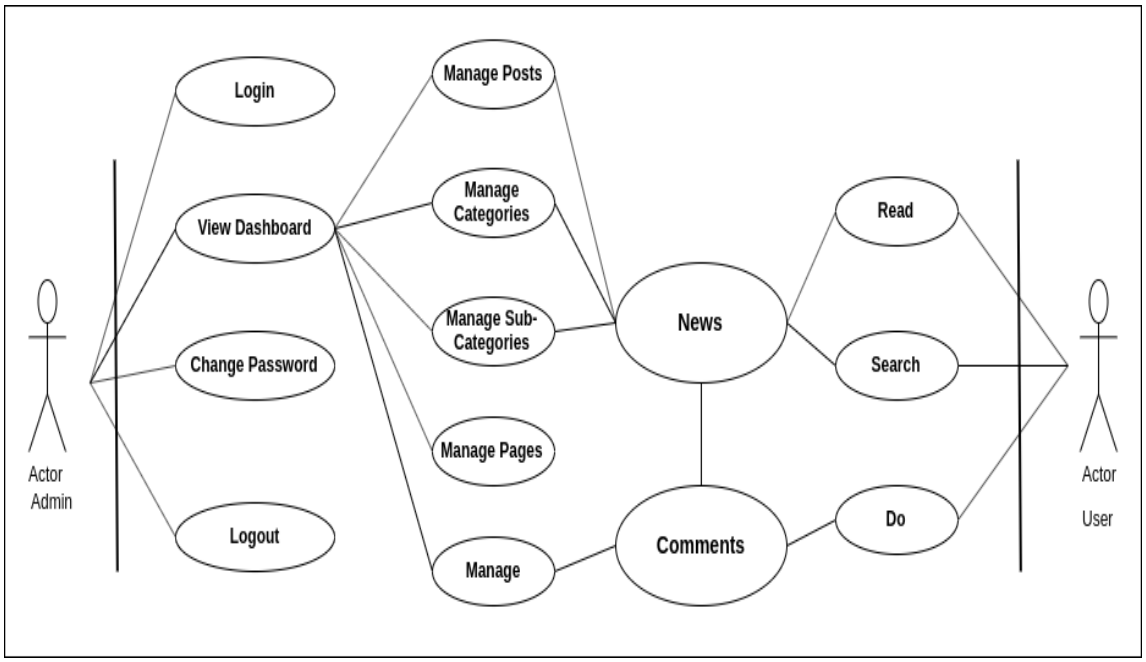

Figure 3.3.3: Use Case Model

3.4 UML Diagram

UML stands for Unified Modeling Language. A UML diagram is a diagram based on the purpose of visually representing a system along with its main actors, roles, actions, artifacts or classes, in order to better understand, alter, maintain, or document information about the system [4]. It provides improved integration between structural models like class diagrams and behavior models like activity diagrams. This also provides the ability to define a hierarchy and decompose a software system into components and sub-components. This also provides the ability to define a hierarchy and decompose a software system into components and sub-components. This also provides the ability to define a hierarchy and decompose a software system into components and sub-components. This also provides the ability to define a hierarchy and decompose a software system into components and sub-components. This diagram shows the overall activities including primary key of a class [6]. Figure in next page shows the UML diagram of DIU News Portal.

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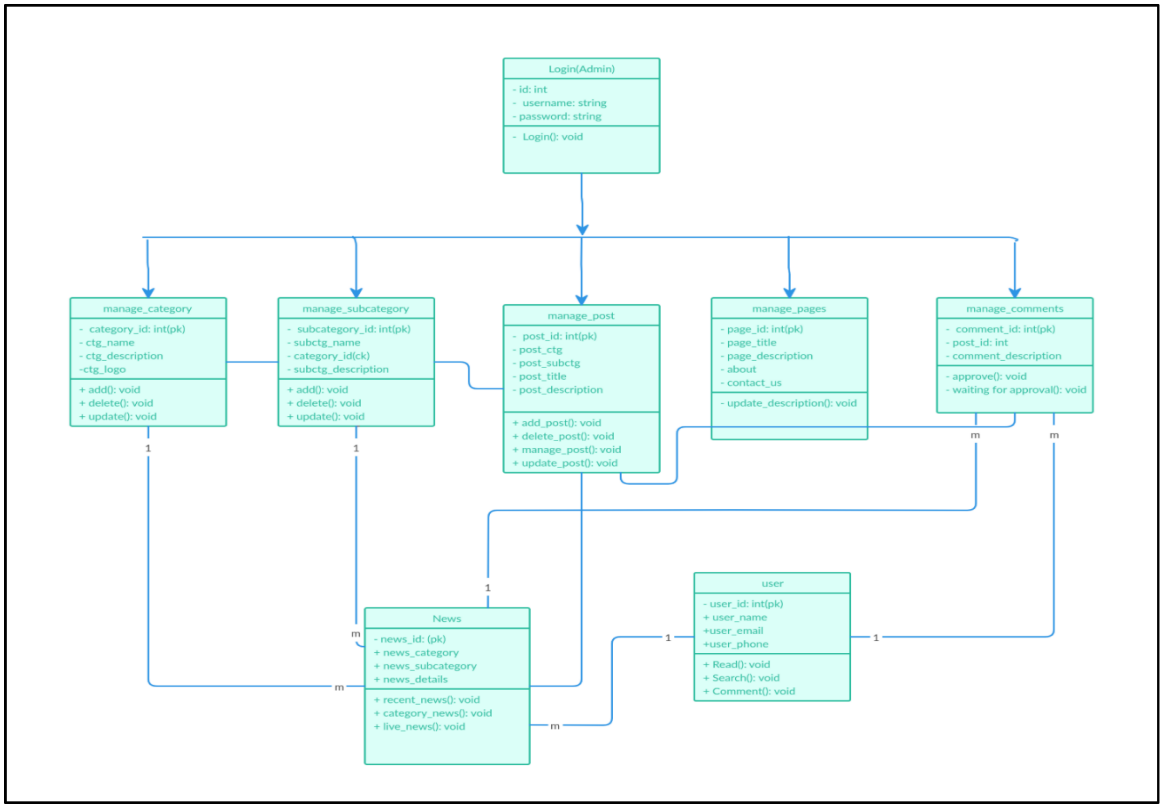

Figure 3.4.1: UML Diagram of DIU News Portal

3.5 Design Requirement

Design requirement is the process that enable to convert ideas to specified system requirement [4]. These engineering requirements become parts of the design requirements for the product. We have already described use case diagram, data flow diagram, DFD diagram, UML diagram what are necessary for a project. Modern and updated tools have been used to develop this project. That's why the application has become user friendly.

ARCHITECTURE DESIGN

The architecture design of web application describes the interaction between application, middleware systems and database on the web surface.

It also describes behavior, structure and views of that application. My projects architecture design works upon the given procedure:

- The user enters the web address (that can be got by purchasing domain) through any web browser.

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- Then the web browser send a request to web server to access into the specified web address.
- After that, web server links to the PHP files of that address and fetch data from database.
- Finally data is shown and user can use it.

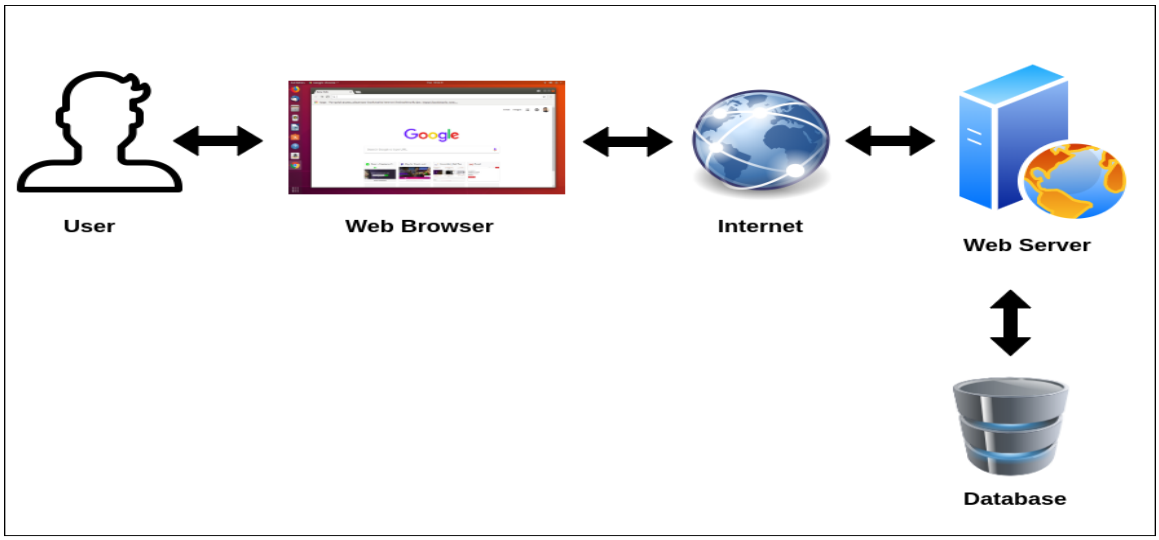

Figure 3.5.1: Architecture Design of Project

Database stores all the necessary data what is predefined by the database designer. The designer specifies what to be stored, where to be stored and what the representation of model data. Data stored in database are classified and organized, and there is interrelationship between data.

Database can provide exact data from the millions of data because of having two main factors:

- *Primary Key:* Actually primary key is used for uniquely identification. Database extracts data when primary key is matched.
- *Foreign Key:* To show relationship between tables foreign key is used. Another term 'Normalization' is used to avoid redundancy of data.

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CHAPTER 4

DESIGN SPECIFICATION

4.1 Front-end Design

Several tools are used to design the whole project. I have used the following tools to design the Front-end:

- HTML5 [9]
- CSS3 [9]
- BOOTSTRAP [10]
- PHP [9]
- JAVA SCRIPT [9]
- AJAX [9]

4.2 Back-end Design

Using of framework has made the web development much easier. Django, Laravel, ASP.NET is the most used framework in recent time. But it is a matter of sorrow that I have used BOOTSTRAP in front-end just for design purpose. No framework is used for back-end design. I have used PHP as my back-end language which is a server side scripting language.

The most comprehensive set of advanced features, management tools and technical support to achieve the highest levels of MySQL scalability, security, reliability, and uptime [9]. MySQL is an open-source relational database management system. Its name is a combination of “My”, the name of co-founder Michael Widenius's daughter, and “SQL”, the abbreviation for Structured Query Language MySQL is the most popular for database management system. I have used MySQL in back-end implementation.

4.3 Interaction Design and UX

DESIGN

The design of the project is very simple and user friendly. Bootstrap framework can do wonderful design and this project is designed using bootstrap. Latest and updated tools

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have been used to develop this project's design. There has been scope for future editing if it is needed.

COMPLETION

This project is ready for primary use and it is capable of fulfilling the basic demand but it is not completely done. This project will be updated continuously.

PROJECT DELIVERABLE

A Project Deliverable means a product or service that a project produces for its project sponsor, client, or customer. Actually it means the outcome of a project. It can be quality improvement, risk reduction and increase of flexibility of the project. Project deliverable from my project provide beneficial change.

RESOURCE ALLOCATION

Resource allocation is the plan of scheduling of activities and the resources required by those activities by which maximum utilization of resources can be achieved. Proper allocation of resources can increase the effective use of resources taking into consideration both project time and resource availability.

4.4 Implementation Requirements

Requirement analysis is a very important part of a project that I have done earlier in this project. When all requirements are collected, some of them may be conflicting. Those requirements should be handled technically and in an efficient solution.

NON-FUNCTIONAL REQUIREMENT

If a project fulfills its functional requirement then it automatically covers some non-functional requirement. Some non-functional requirement that my system has given below:

EFFICIENCY REQUIREMENT

When my project will be developed completely then it can be modified for any organization, university, college or schools to keep the organization updated by providing all news to its users.

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RELIABILITY REQUIREMENT

This application provides reliable environment to its user specially students and teachers to keep them aware of university activities. Guardians who are aware of their child's career may keep eye on this news portal with a view to having the latest news.

USABILITY REQUIREMENT

I have designed DIU News Portal system in a way that users of all sectors can use it easily. In a word, I can say that this application is user friendly.

IMPLEMENTATION REQUIREMENT

Several tools are used to implement the system. Front-end development has been done with HTML, CSS, BOOTSTRAP, JAVA SCRIPT and JQuery. As server side scripting language, PHP has been used to connect with database. MySQL has been used to develop the database of the project. To make the system compatible for all type of screen, responsive web design has been used.

BUSINESS ASSESMENT

Conduct an assessment of the current state of the business. Look at critical processes and note what is being done well and what benefits a new system can deliver for these processes. Once the processes have been identified and scrubbed/reengineered, it's time to document. Again, keeping it simple, just create the process.

USER ACCEPTANCE TESTING

With three CRP's completed and multiple configurations made to the application, it is time to demonstrate the software is ready for the users. Therefore at this stage in the project the application should be ready for enterprise use. As with CRP sessions, ensure job aids and data sheets are used during the testing.

DELIVERY REQUIREMENT

DIU News Portal is a medium scale project. I did the work alone to complete this project. This took almost six months with a weekly evaluation by my project supervisor.

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CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of Database

Database is an important aspect which stores data. It is also considered as background of any project. I have used phpMyAdmin as my database set. I am providing screenshot of the database that I designed for my project.

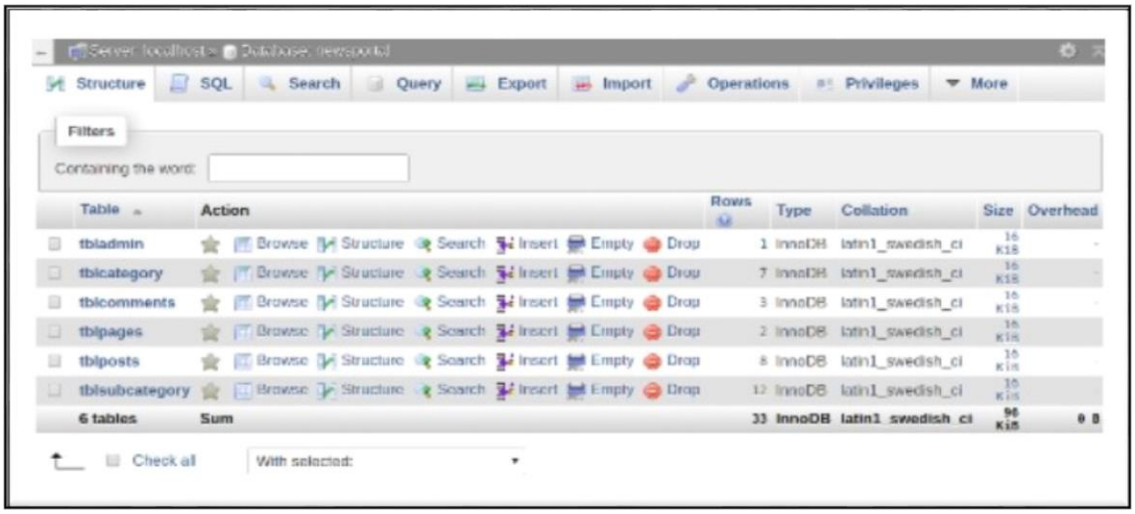

Figure 5.1.1: Screenshot of the database Table

5.2 Implementation of Front-end Design

There are several functions and pages to develop a full web application. Front end design usually interacts with user module. Front end design of a website can make the website beautiful and attractive to the users. Front end design is interesting if you are using the latest bootstrap version for the design section. In this section, I am going to describe about all significant functions that makes the website to achieve its goal. This section actually interacts with user interface.

HOMEPAGE

The starting page of any website or application is referred to as its homepage. It is the main page of application. When an user enters a specific address in browser and hits enter then the browser takes the user to the homepage of the given address. The homepage of my

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project covers several pages. I'm providing the screenshots below by merging them all in one image:

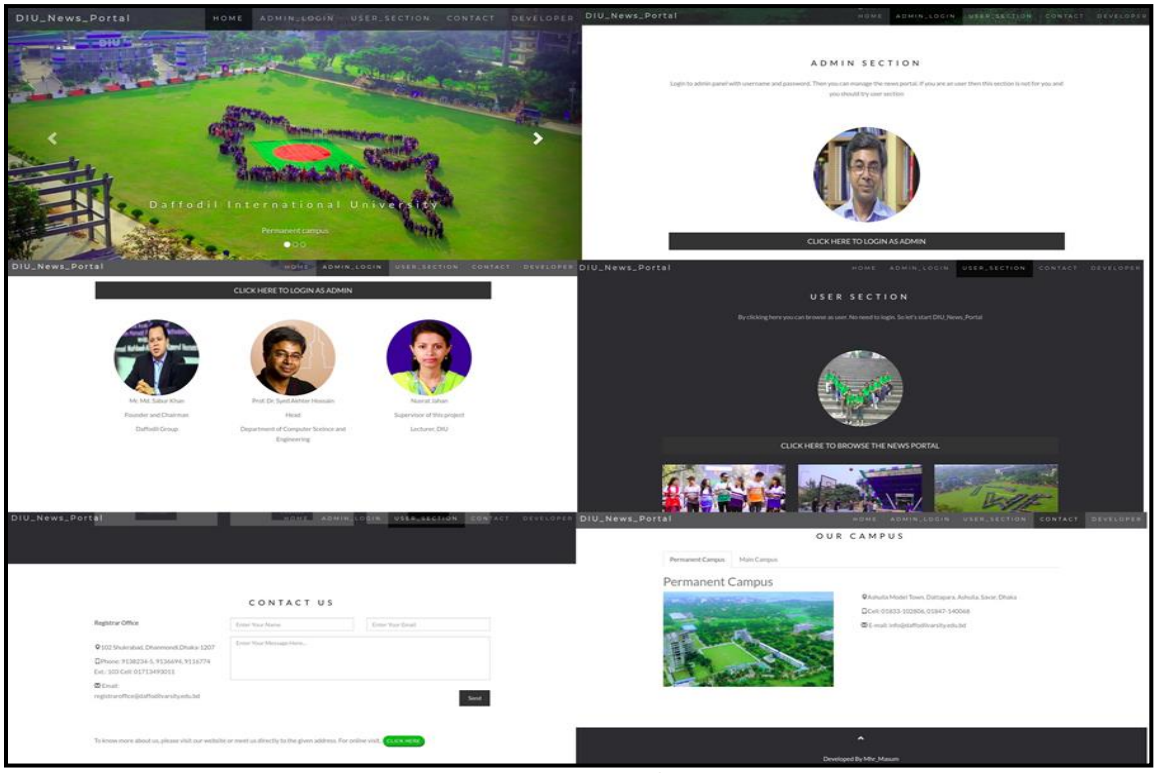

Figure 5.2.1: Screenshots of Homepage

ADMIN PANEL

This section deals with all the activities of Admin. Admin is responsible for all kinds of management system. Only admin has the ability to enter into the portal as administrator. This is the main part of the news portal for management system. That's why I have to keep focus on it more than user section. The admin panel usually logged into admin is where new posts, categories, tags, pages, links and custom post types are created. It's also where theme files are changed, widgets are added, plugins are activated or updated, and reading/writing/general settings are changed. In short, the admin panel is where the content is created and the website is managed. This is the key to how a content management system works. Essentially, a CMS is just a series of forms that take the place of manually creating files and uploading them to the server. They simplify that process. There are some subsections to control this panel which are described below:

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Admin Login

In this part admin is required to login to enter into the admin panel. Screenshot below shows the procedure

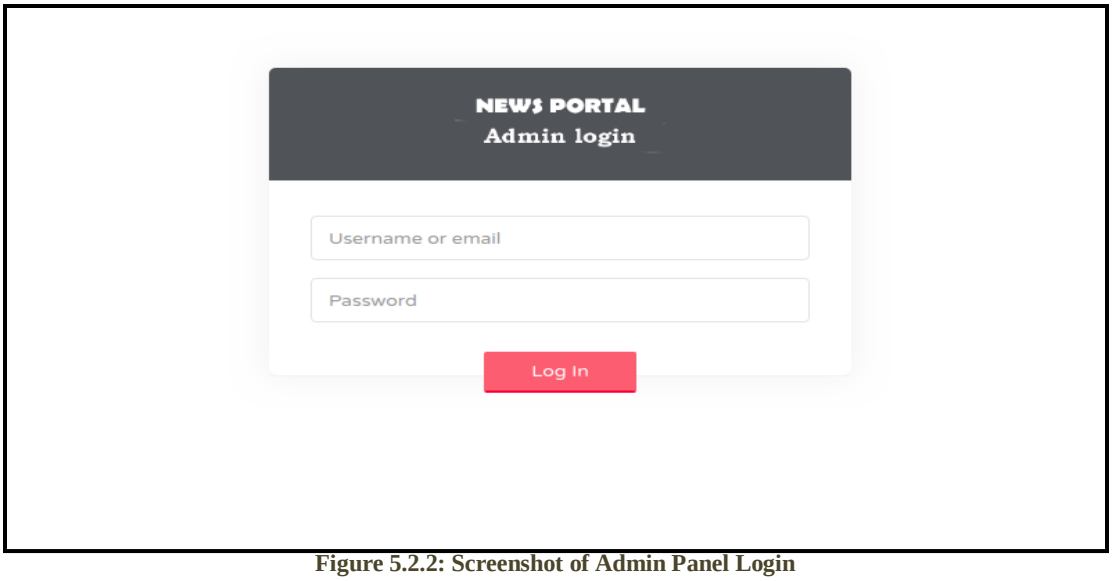

Figure 5.2.2: Screenshot of Admin Panel Login

DASHBOARD

After a successful login session, Admin goes to the Dashboard. Screenshot is given in next page.

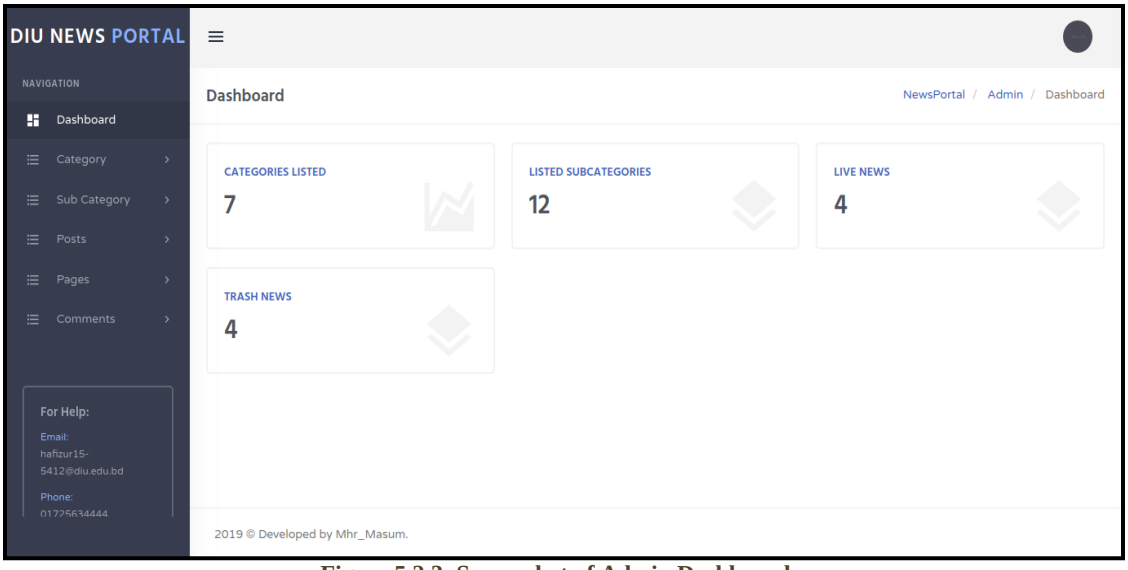

Figure 5.2.3: Screenshot of Admin Dashboard

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ADD CATEGORY

Here category of news will be added. This section is useful to maintain news category.

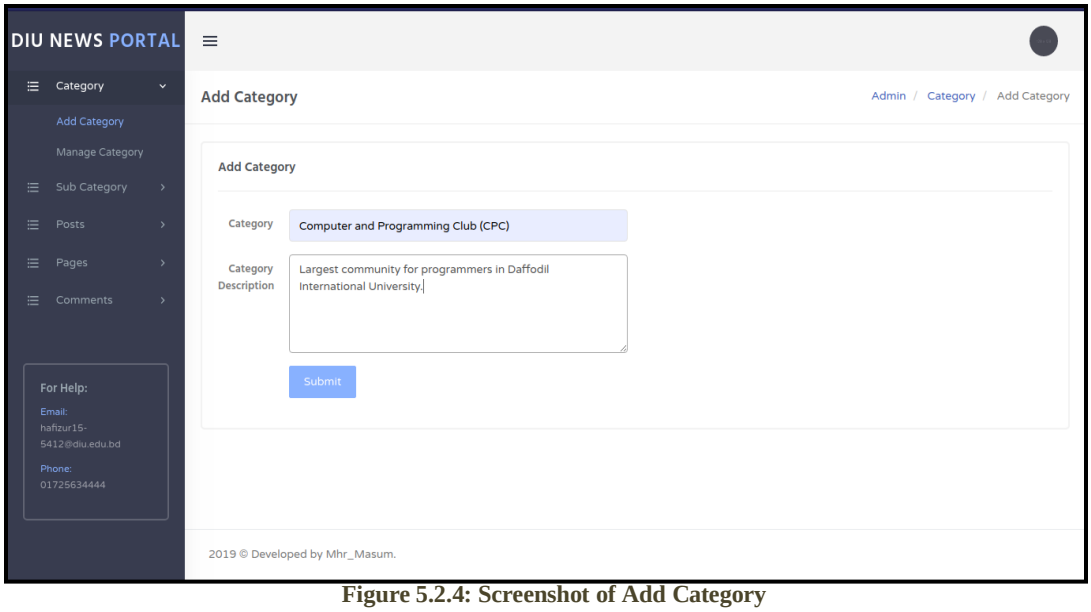
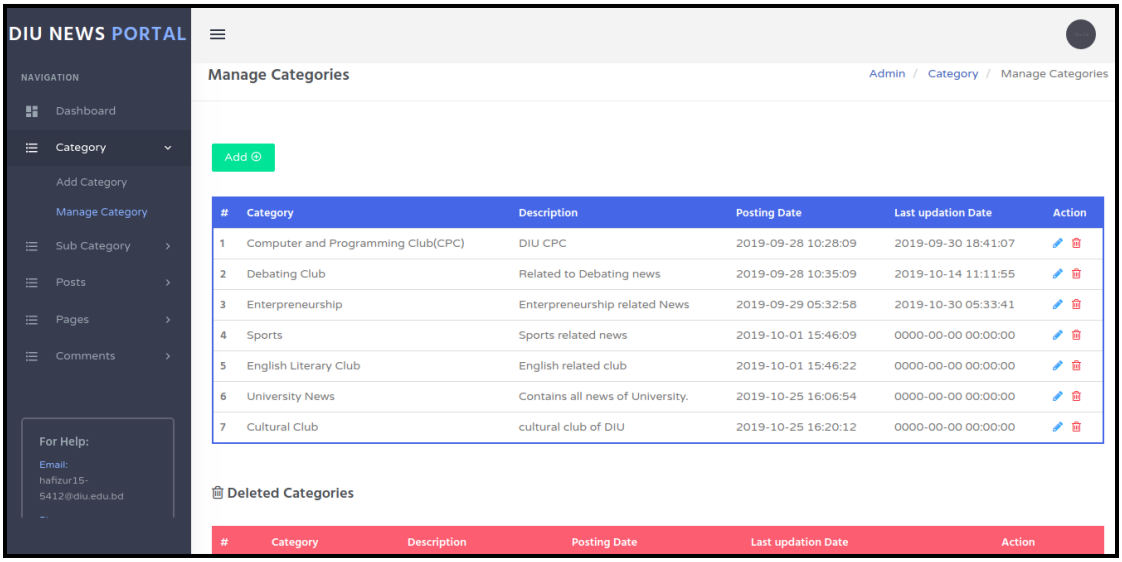


Figure 5.2.4: Screenshot of Add Category

MANAGE CATEGORY

This part keeps record of all categories present in the news portal and categories what are deleted by admin. Category can be updated and deleted and restored when necessary.**Figure**



5.2.5: Screenshot of Manage Category

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ADD SUB-CATEGORY

Sub-category can be added under any category.

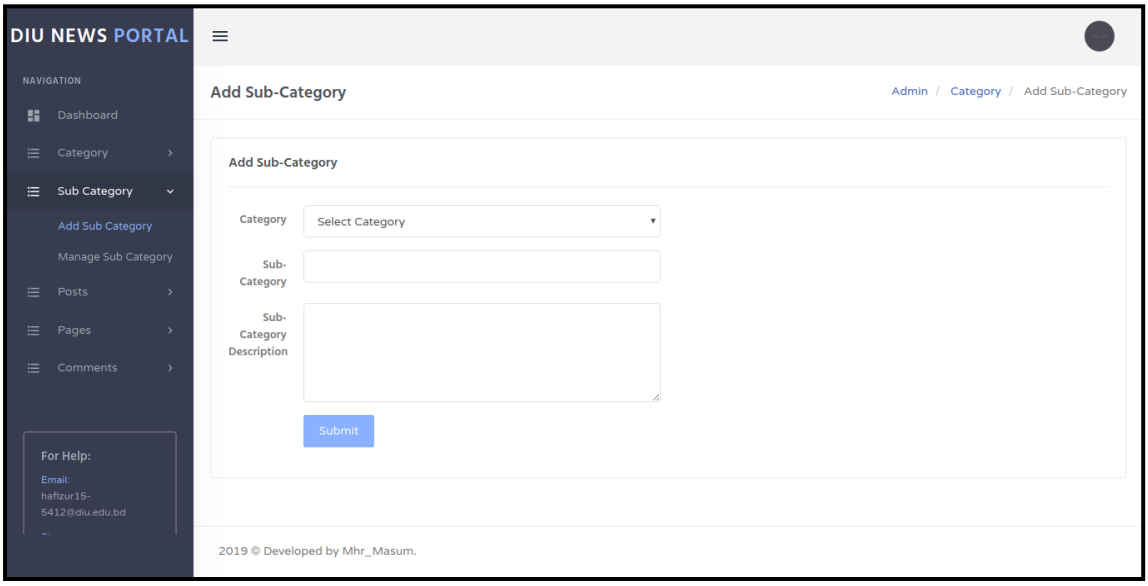

Figure 5.2.6: Screenshot of Add Sub-Category

MANAGE SUB-CATEGORY

This part works as the same as "Manage Category" where sub-category can be updated and deleted and restored when necessary.

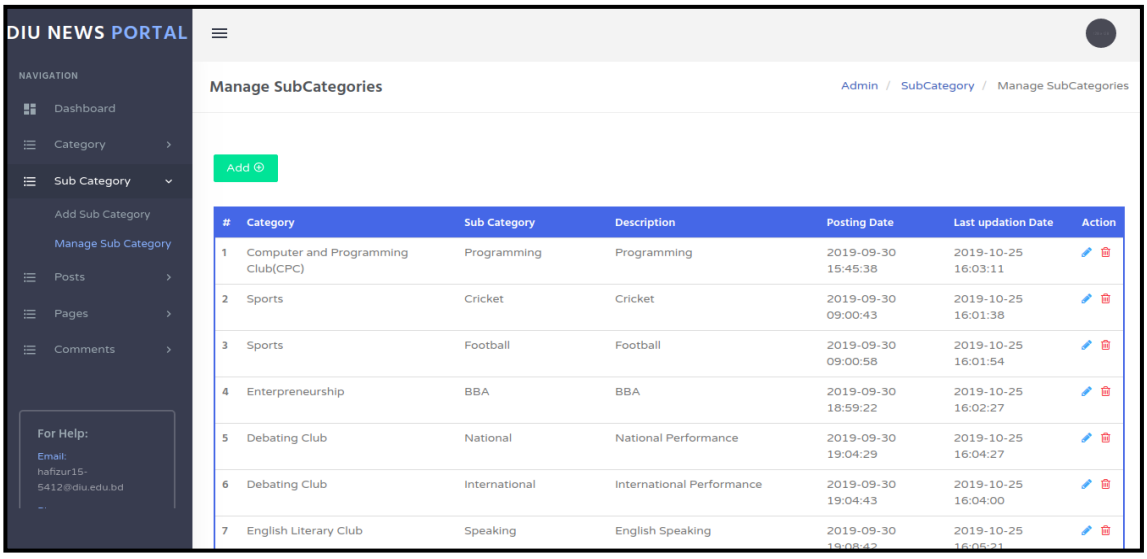

Figure 5.2.7: Screenshot of Manage Sub-Category

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ADD POST

Admin can add news in this section. For this, he needs to select category, sub-category, then paragraph section and finally image.

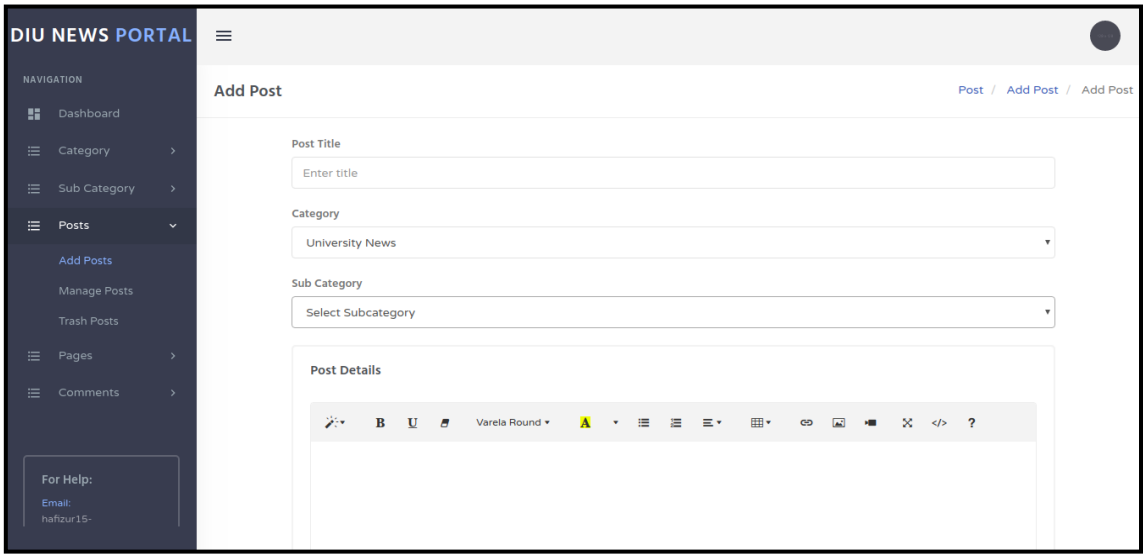

Figure 5.2.8: Screenshot of Add Post

MANAGE POST

Admin manages post here. He can edit and delete post. He can update post's image, change category, subcategory and also delete post.

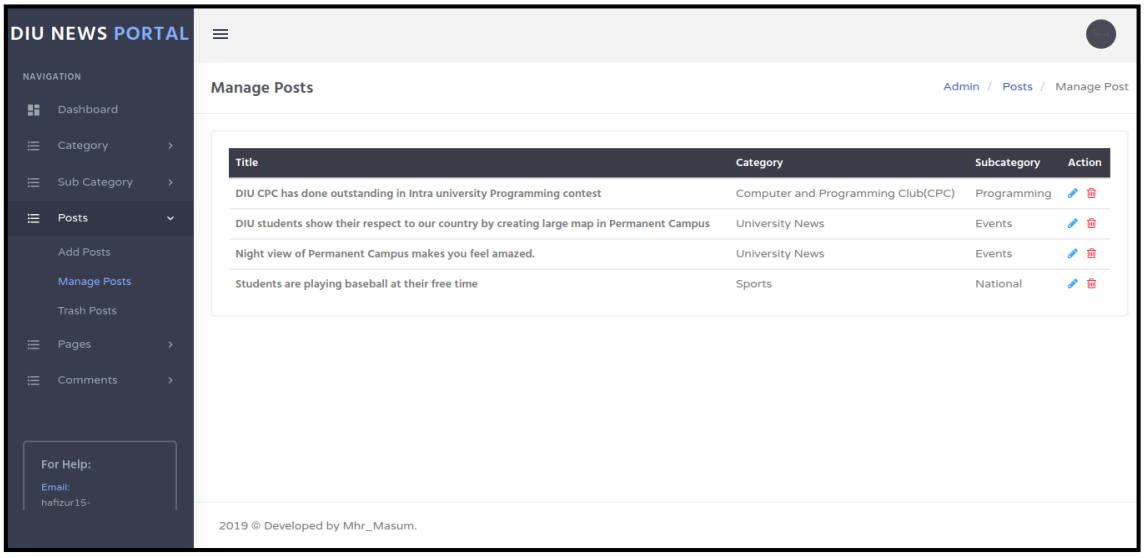

Figure 5.2.9: Screenshot of Manage Post

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TRASH POSTS

Posts deleted by admin are stored here. Trash posts can be deleted permanently or restored again in news section.

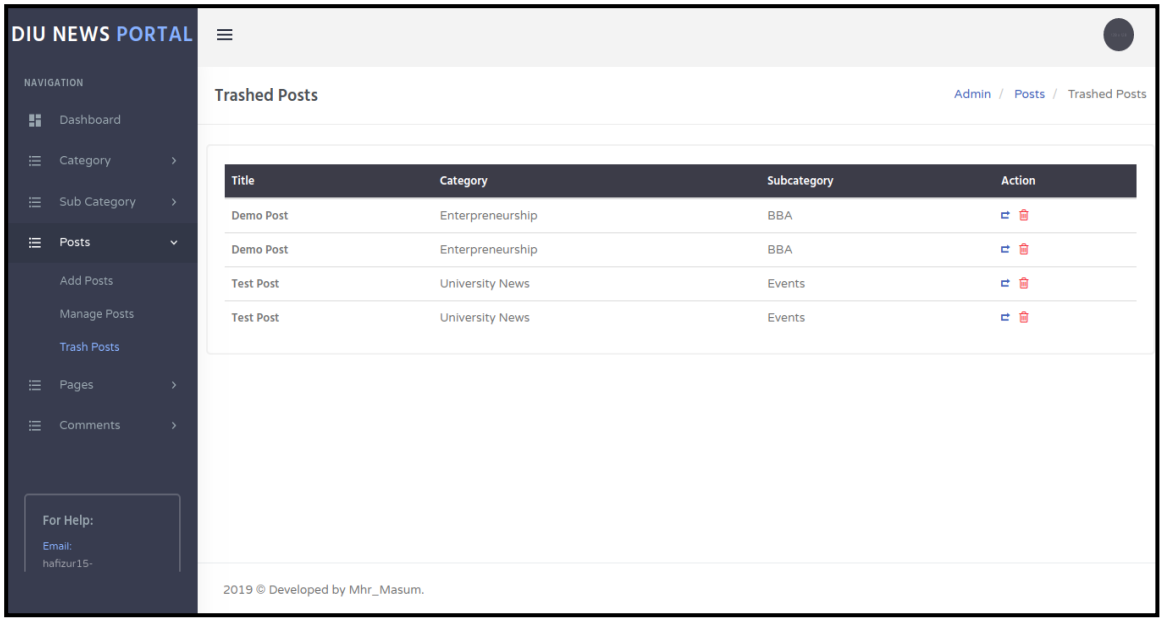

Figure 5.2.10: Screenshot of Trash Posts

ABOUT US

This lies in Page heading. This section contains the goal of the project.

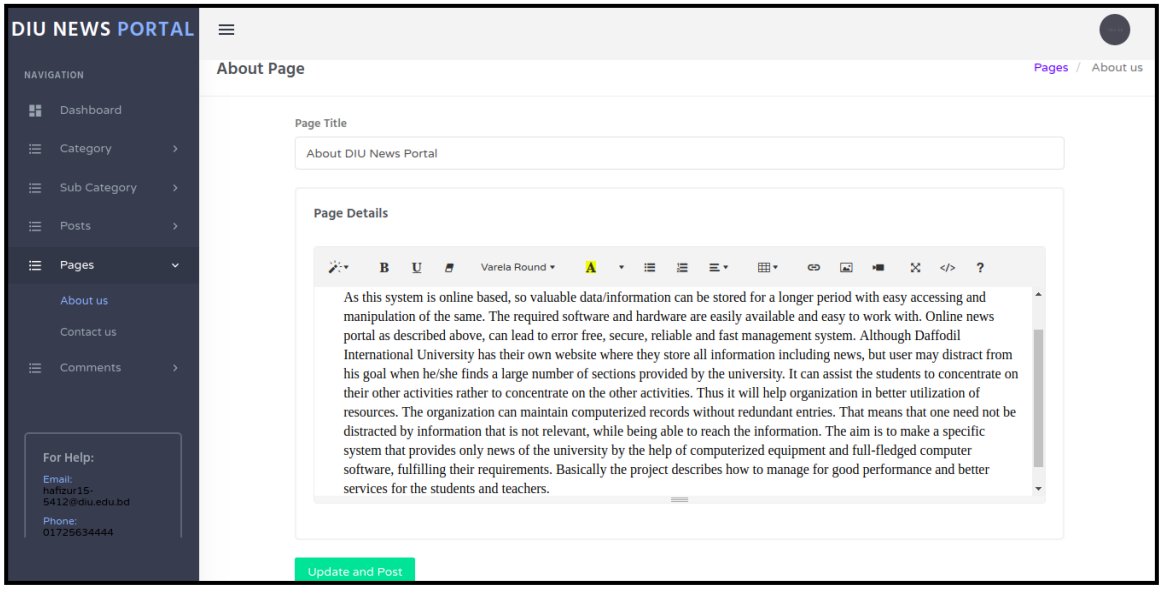

Figure 5.2.11: Screenshot of About Us

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CONTACT US

Admin can set contact address here what will be visible to user section.

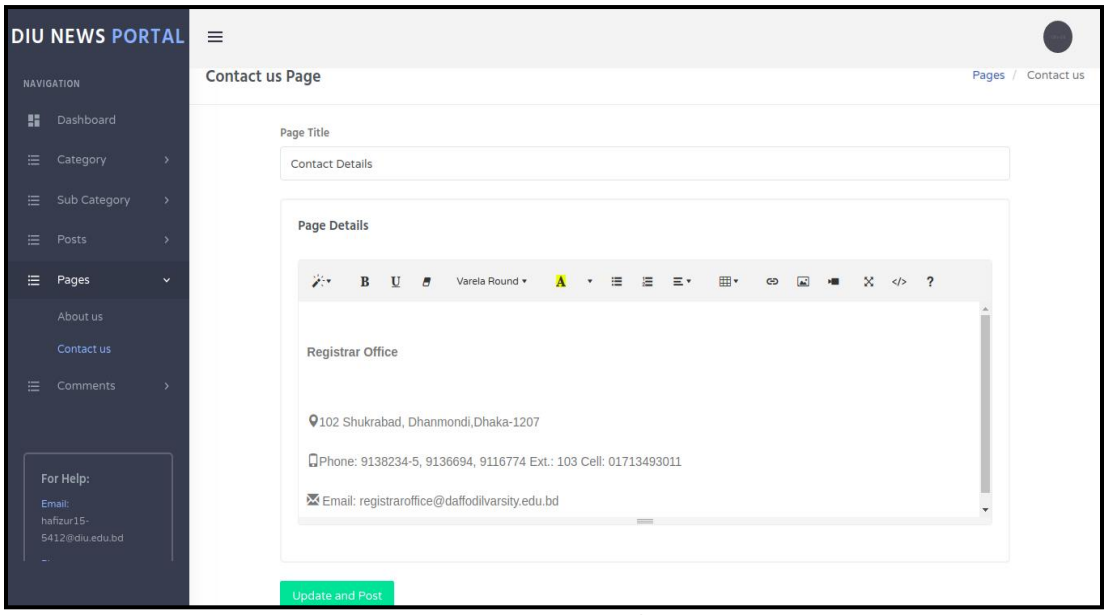

Figure 5.2.12: Screenshot of Contact Us

COMMENT: WAITING FOR APPROVAL

Comments that are not confirmed yet will appear in this section. Comments can be approved or deleted depending on its usability.

Figure 5.2.13: Screenshot of Unapproved Comments

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APPROVED COMMENT

Comments that are approved will appear in this section. This interacts with user comments.

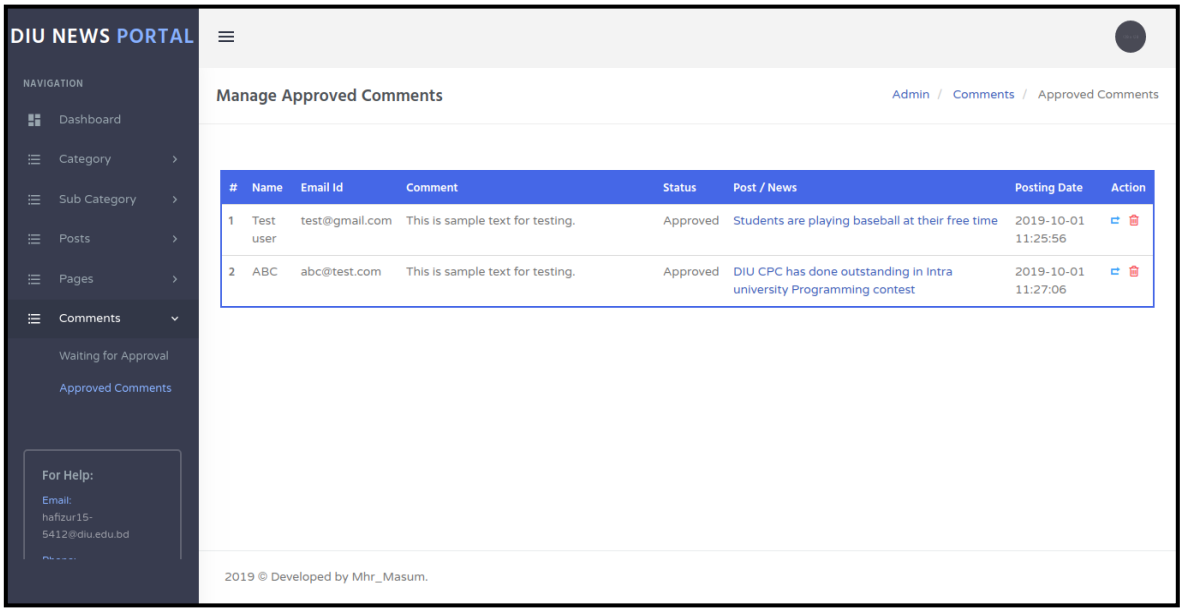

Figure 5.2.14: Screenshot of Approved Comments

CHANGE PASSWORD

Admin can change his password when he needs.

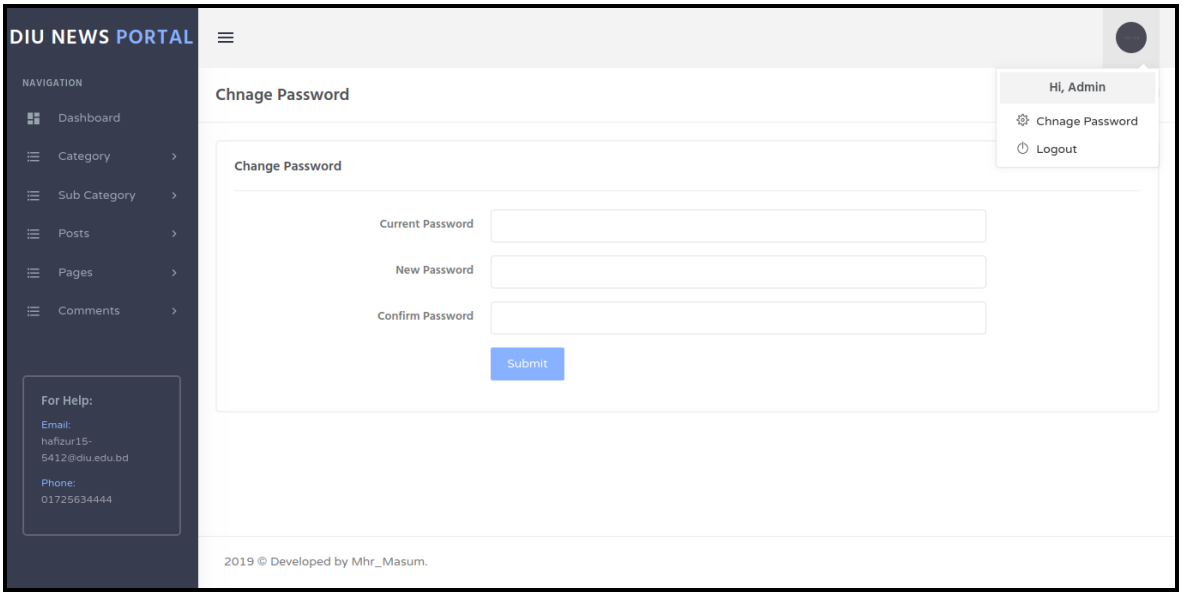

Figure 5.2.15: Screenshot of Change password

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User Part

USER HOMEPAGE

User gets news in homepage. He also finds category and recent news in homepage. Lets have a look on screenshot

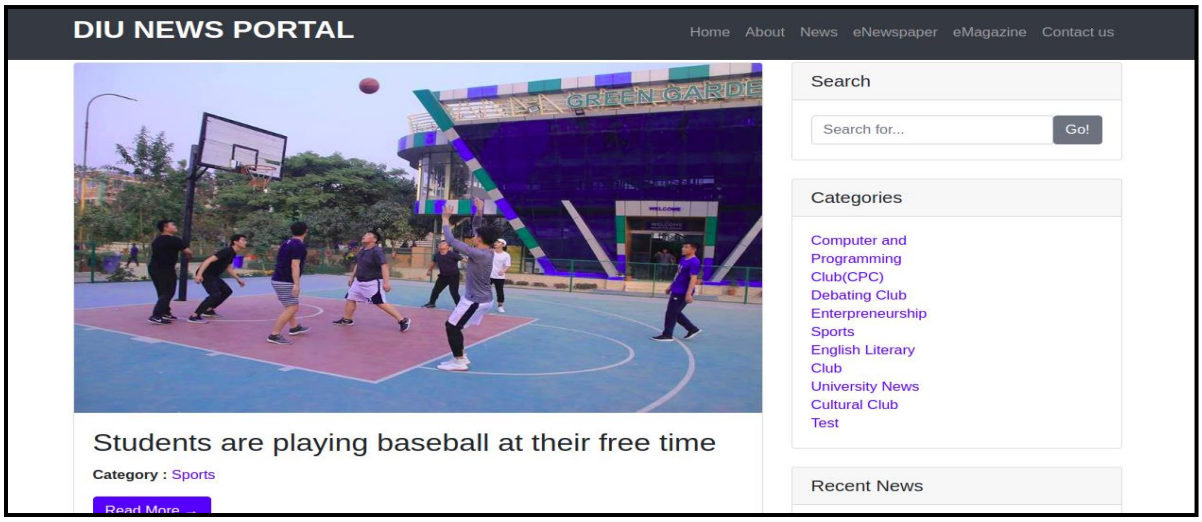

Figure 5.2.16: Screenshot of User Homepage

USER COMMENT

User can share his opinion by comments. For this he needs to provide name and email id along with comment.

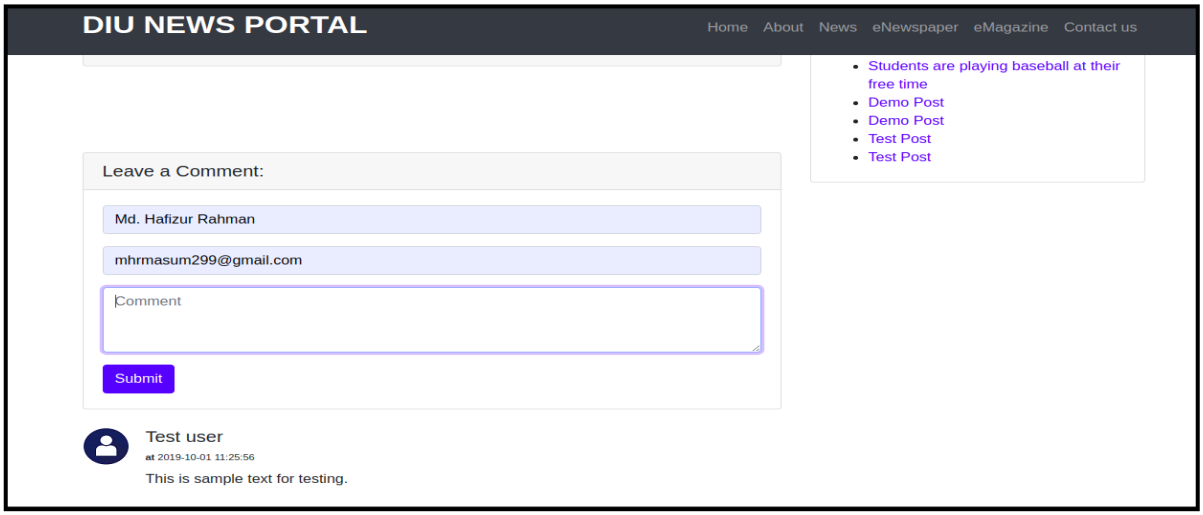

Figure 5.2.17: Screenshot of User Comment

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SEARCH BAR

Search bar is provided with a view to searching a specific news from a large number of news.

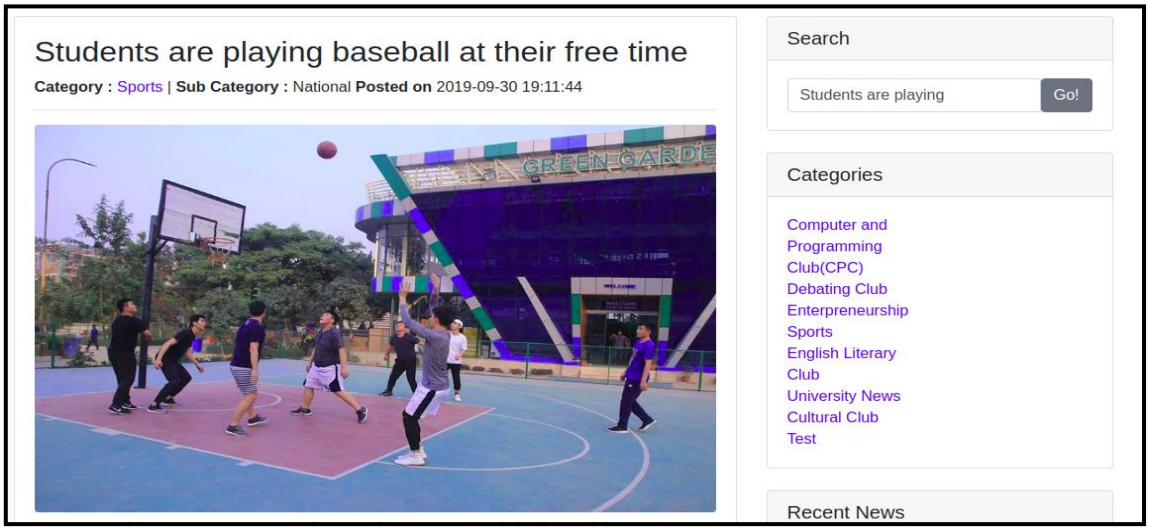

Figure 5.2.18: Screenshot of Search bar

eNEWSPAPER

eNewspaper contains some favourite newspapers available on internet. By clicking on image provided users can go to the specific newspaper.

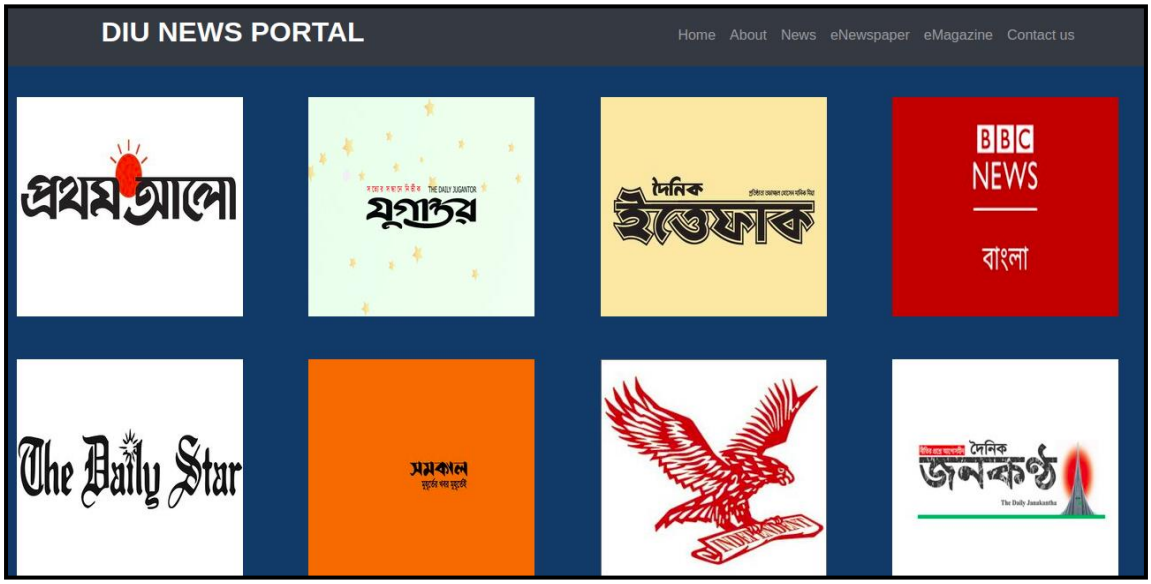

Figure 5.2.19: Screenshot of eNewspaper

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eMagazine

Same as eNewspaper this section contains both Bangla and English online magazines.

Figure 5.2.20: Screenshot of eMagazine

5.3 Implementation of Interactions

Advancement of technology has made life easy. Technology is working to solve every problem whether it is small or big and give us the smarter system continuously. As a student of Computer science and technology of Daffodil International university, I faced this problem to keep me updated with news in lack of university's own news portal. The universities that has top world ranking hold their own news portal. When I felt scarcity of news portal, I intended to make one for my university and I choose this as my final year project.

5.4 Testing Implementation

It is one of the most important procedure of software development life cycle. After finishing development of the project testing is done so that developer can aware of the limitation of the project and development scope for the project [11]. Implementation testing generally refers to the process of testing implementations of technology specifications. This process serves the dual purpose of verifying that the specification is implementable in practice, and that implementations conform to the specification. This process helps to

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improve the quality and interoperability of implementations. contradictory or not implementable I have done some basic testing for my project that are given below:

Table 5.4.1: Testing Implementation

Test Case	Test Input	Expected Outcome	Obtained Outcome	Pass or Fail
1.Admin Login	Login with real information	Successfully Login	Successful Login	Pass
2.Admin Login	Login with wrong information	Failed to login	Username or password is not correct. thats why failed to login.	Pass
3.Change Password	Procedure done with real password	Successfully changed	Successfully changed	Pass
4.User comment visibility	User commented and admin approved	Comment should be visible under the news	Comment is visible	Pass
5. Add post	Sub-category was unchecked	It will prevent to add post	Select a sub-category	Pass
6.Update image of previous news	Tried to change the image of old news	Successfully update new image	Post updated with image	Pass
7.Restore trash post	Wanted to add the news that previously deleted	Should be restored	Successfully restored	Pass
8.Delete news forever	Clicked on the delete icon in trash post.	Post deleted permanently	Post deleted permanently	Pass

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9.Make comment unapproved from approved	Clicked on the icon whose toggle shows unapproved this comment	Post should appear in “waiting for approval” section	Changed to unapproved	Pass
10.Search a specific news	Wrote the title of news in search bar	This should take you to the specific news.	Found the specific News	Pass
11.Logout	Clicked on logout button	Log the admin out	Successfully logged out	Pass

5.5 Test Results and Reports

Test reports can give a client or organization a clear idea about the project. The report contains the ability of the application and scope of improvement. Test report is useful when the system goes for another test. There can be a comparison of development or improvement [11]. There are several ways of testing. If a system passes through all types of testing then it is wise to launch the application. Finally we can take the result as the benefits of usability testing.

Table 5.5.1: Benefits of Usability Testing

Benefits of Usability Testing	No	Yes
User Friendly		✓
Useful for users		✓
Provides good quality of the system		✓
Provides necessary security		✓
System is fast and rapidly accepted by users		✓

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CHAPTER 6

CONCLUSION AND FUTURE SCOPE

6.1 Discussion and Conclusion

I have developed DIU news portal to reduce user's difficulties to get news of the university. I think, this application will be treated as supportive, helpful and useful to users. News is the most important thing for an organization. If users are provided with real news when they need, then they can organize their personal schedule as per demand. Online news portal as described above, can lead to error free, secure, reliable and fast management system. Although Daffodil International University has their own website where they store all information including news, but user may distract from his goal when he/she finds a large number of sections provided by the university. By using this system users will be closely connected to the university and there is no opportunity to miss any activity, event, seminar and programs if one visits the portal regularly. DIU News Portal reduces effort, cost, time and potentials that are needed to collect news. I can ensure that it will be large integrating news system for educational instructions.

6.2 Scope for Further Development

Honestly speaking, this project is in its beginner stage. This project will be updated gradually. For example: at present, there is only one admin for this system who will manage the whole system. In reality it is very difficult to gather news about entire university. That's why I thought that in next update, system will have multiple admins who will be controlled by a main admin for multiple category of news. President of every club should be admin for a particular section. It will be easier to collect news. I have planned to add counter which will count total number of visitors in a single day into the news portal. Further version of this project will also provide the facility to send news to specific admins by any user of the portal. Just like this, there will be lots of updates that will come gradually. I believe, in near future other universities will be encouraged to make their own news portal just by following daffodil's one.

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APPENDIX

Appendix A: Project Reflection

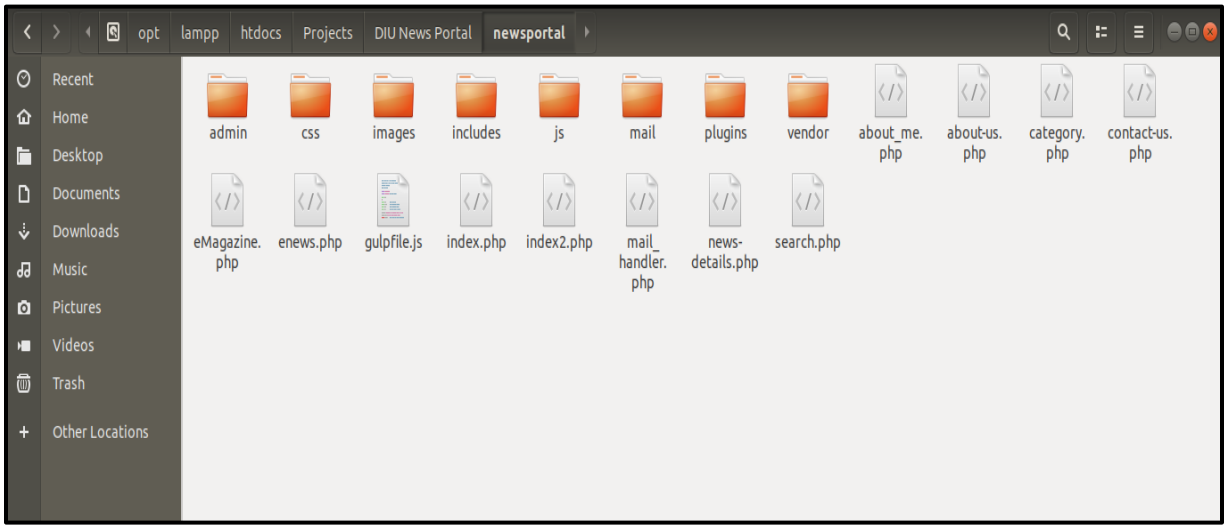

Figure A.1: Project Development step by step

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