

RAPID PASS

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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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We hereby declare that, this project has been made by us under the supervision of **Hasna Hena**, **Assistant Professor, 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.

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ABSTRACT

This report presents an Android application “Rapid Pass” that helps its users to get part time identification card and also helps to get appointment schedule in an educational institution or other offices. The app provides three main features: Firstly, Users can apply for a part-time ID card through the app by submitting their personal information and a photo. The ID card is required for access to the institution's and office's facilities and services. The app allows its users to schedule appointments with the institution's departments or staff, making it easier to coordinate and plan their work. Employees with access to the app's admin panel can use it to record the daily attendance of other employees, streamlining the process and reducing the need for paper-based record-keeping.

The app was developed using the Flutter programming language and the Android Studio development environment. It was tested on various devices to ensure compatibility and usability. A user survey was conducted to gather feedback and identify areas for improvement. The results show that the app is easy to use and saves time and effort for both user's, employees, and the educational institution and offices.

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Chapter 1

INTRODUCTION

1.1 Introduction

Smartphones are the most usable companion in our daily life. By its grace, everyone makes their life easier. There is no substitute for it.

From dusk to dawn we somehow depend on the smartphone. In work, entertainment, and communication we are stuck on it. Order foods, Play-games, and do online shopping. We use our smartphones for various reason of our daily life. So why don't we make an application that make's place more secure and make it easy to take an appointment easily?

Through our application Visitor Pass, it will become very easy to generate immediate and part time identification card easily which can make's a place more secure and makes easy to take appointment easily.

1.2 Motivation

In the present century, this world is advanced day by day. Everyone wants a shortcut in their daily life. People go to industry, office, collage, university, different organizations for their daily works. In that time people may go any unknown place or have to meet any high-profile person. So, it's complicated to take an appointment of the person and in that place to identify a visitor is also a big issue.

So, we come up with a solution that, by using our app visitor can make an appointment, do pre-register, make an immediate and temporary identification card and also the employees can give their attendance through our application.

1.3 Objective

The Objective of our project is to build a user-friendly app that can help to get visitor pass, take appointment and attendance for the employees.

1.4 Expected Outcome

After completing the project, it will be a smart user friendly-app that will be easy to use, and by using it, anyone can get a place's visitor pass, get an appointment and give attendance easily.

1.5 Project Management and Finance

We must first create a UI for our application because we lack expertise. First, we must commission an expert to create a UI. It cost three thousand takas to do it.

Additionally, purchasing a name costs three hundred Taka, and a year's worth of hosting costs twelve hundred Taka.

1.6 Report Layout

Chapter 1

Introduction

Here we discuss the Motivation of our Project and also the introduction, Objectives, and Expected Outcomes of the Project, which were the raw words of our Project.

Chapter 2

Background

In that chapter, we will discuss the Related Works of our project, that our project is similar to any other project, Comparative Works like what difference between our project and a similar project and what is the benefit of using our app, and the Scope of problems like which types of problems should we face & requirements Of our project. In this part, we will discuss the Problems and challenges we may face.

Chapter 3

Requirements Analysis

In That chapter we will discuss about requirements collection, analysis, description, use case modeling & also the business model we have followed on our application.

Chapter 4

Design Specification

In that chapter we will discuss about the design of our project with front end and back-end description. In front end and backend which languages or framework we used will be described. And, also the Interaction design and user experience, and implementation requirement's will be given properly.

Chapter 5

Specification & Testing

In that chapter, we will discuss how we should implement our database and front end. Also, we will discuss the testing implementation and give the test results and report.

Chapter 6

Impact on Society, Environment and Sustainability

In that chapter, we will discuss the impact of our application on society & environment. We will also discuss what should be our ethical aspect in this project. And the sustainability plan of our application.

Chapter 7

Future Scope & Conclusion

In that chapter we will discuss about the future development we will made and the conclusion.

Chapter 2

LITERATURE REVIEW

2.1 Terminologies

Mobile application has started to reshape how we live; everything around us has a touch of Mobile application in it, so we are with our Rapid Pass. In the present era, Rapid Pass can give services to any visitors to take their part-time entry pass, and it will also help to make an appointment in a shortcut way. And also, the employees can give their daily attendance in it.

In our application, API, MVC architecture, and firebase is the core part. We use flutter and its framework because it has the cross-platform capability. It can bring a revolution in public security in a different way. [1]

2.2 Related Work

After researching related work, we have yet to find any fully similar project existing in our country or elsewhere. However, there are few apps that can generate part-time visitor passes named as “Visitor Pass, Visitor Pass, Visitor, Easy Visitor Pass”. Some of those application’s don’t even require to take the visitor’s pictures when generating the id card. We came up with a fully different concept. That may consume our valuable time in our daily life.

2.3 Comparative Studies

Our developed application’s concept is different from others. So, there is no fully similar application. Nevertheless, there are some apps in the play store named Visitor Pass, Visitor Pass, Visitor, Easy Visitor Pass. But you could not pre-book an appointment through. Alternatively, you can take attendance on the same application. However, we have more functionality than those applications, like taking pre-booking, printing the part-time pass cards immediately, and having an attendance system.

2.4 Scope of Problems

Our developed application's concept is different from others. So, there is no fully similar application. Nevertheless, there are some apps in the play store named Visitor Pass, Visitor Pass, Visitor, Easy Visitor Pass. But you could not pre-book an appointment through. Alternatively, you can take attendance on the same application. However, we have more functionality than those applications, like taking pre-booking, printing the part-time pass cards immediately, and having an attendance system.

2.5 Challenges

There are challenges ahead of us as we work on this massive undertaking. At the outset of development, we were faced with the difficulty of creating a simple and intuitive User Interface. To make the design more user-friendly and appealing, certain adjustments will be necessary. Before making any changes, we collect feedback from our users. We also ran into trouble when trying to plan out the database's architecture. Due to our lack of prior knowledge in this area, we will need to educate ourselves before we can effectively create a database. Integrating API with the application is also really challenging for a beginner. In addition, the most challenging part is managing the State Of the application.

Chapter 3

Requirement Specification

3.1 Business Process Modeling

Business process modeling, or simply a depiction of a company's business operations, is an analytical representation [2]. For business process management to be successful, modeling processes is essential. The process of introspection is aided by the use of business process modeling. When we analyze our processes, we learn more about how our company runs. Outside of that, though, there are a number of other advantages. Like

- **Improving Efficiency:** Business process modeling's primary goal is to enhance operational efficiency. It's certain that as we experiment with the process, we can discover methods to increase its efficacy, productivity, output, and, ultimately, profitability.
- **Transparency:** The employee's of our organization will have a general understanding of your processes, including their purpose, how they function, and so on. As a result, it is clear who is responsible for each step of the process.
- **Conquer Our Rivals:** Long-term success and survival against our rivals is ensured by the other advantages we've discussed.

3.2 Requirement Collection and Analysis

The term "requirements collecting" refers to the process of determining what resources will be needed to finish developing the software. We divided the requirements into two parts—first functional and second non-functional.

Functional Requirements:

To put it simply, functional requirements are the characteristics and capabilities of a product that must be implemented by designers and builders so that end users can do their intended jobs. The functional requirements of a system define its operation under certain constraints. For the functional requirements:

- We need to discuss about what our product does.
- We have to focus on our user requirements.

- We have to try to full-fill user requirements from our features.
- We have to make use case to understand the functionality properly.
- We have to test the API & Ui
- We also need to make business rules and external interfaces.

Non-Functional Requirements:

The behavior and limitations of a system are defined by its nonfunctional needs. These specifications are frequently referred to as the quality aspects of the system. For the nonfunctional requirements:

- We have to discuss the usability. That is how much difficult the application is to use for the user.
- Secondly, we have to secure our application. That no one can gain unauthorized access.
- Next, we need to make a process that can serve more users and process more data.

3.3 Use Case Modeling and Description

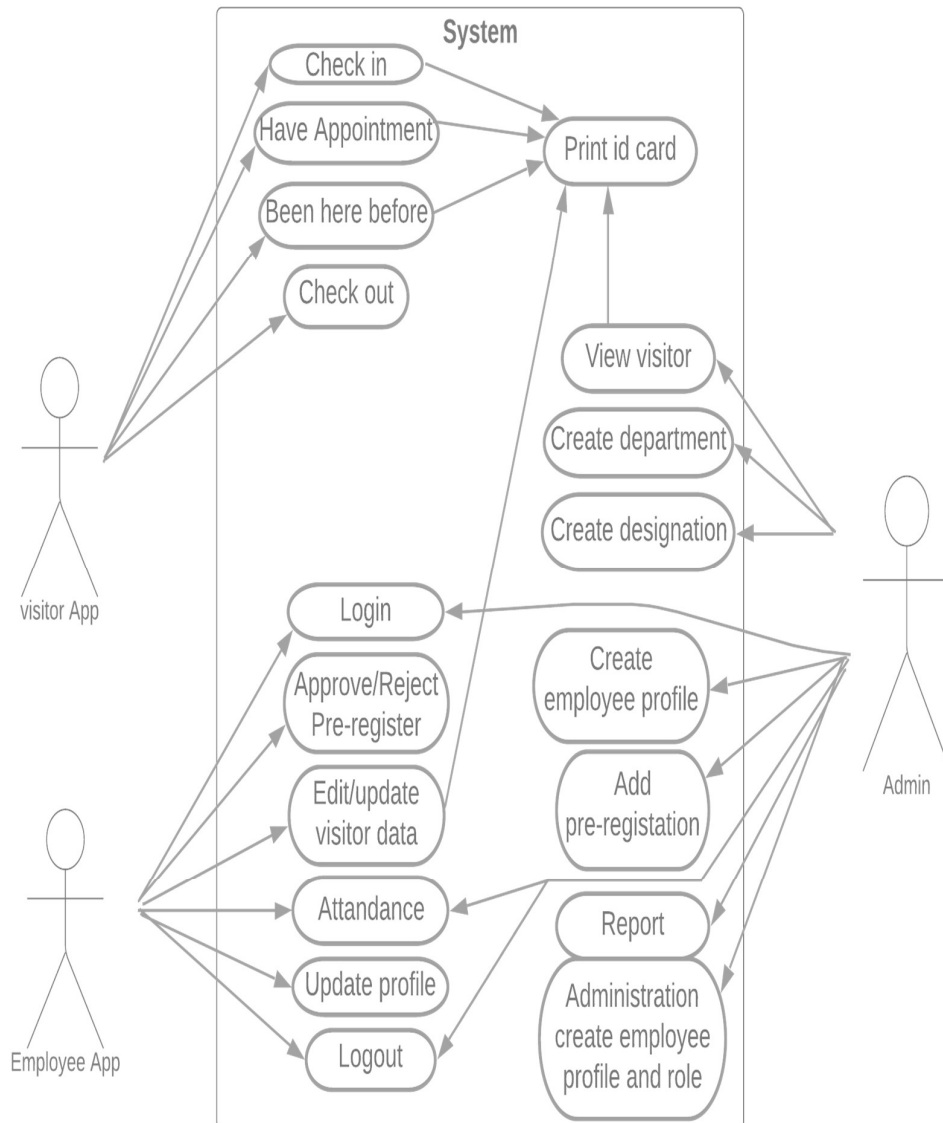


Fig.3.3.1: Use Case Modeling

3.4 Logical Data Model

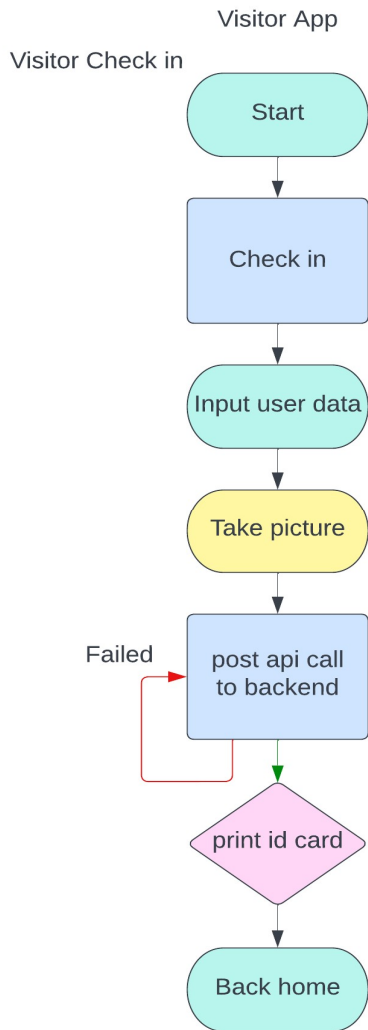


Figure 3.4.1: Visitor check in

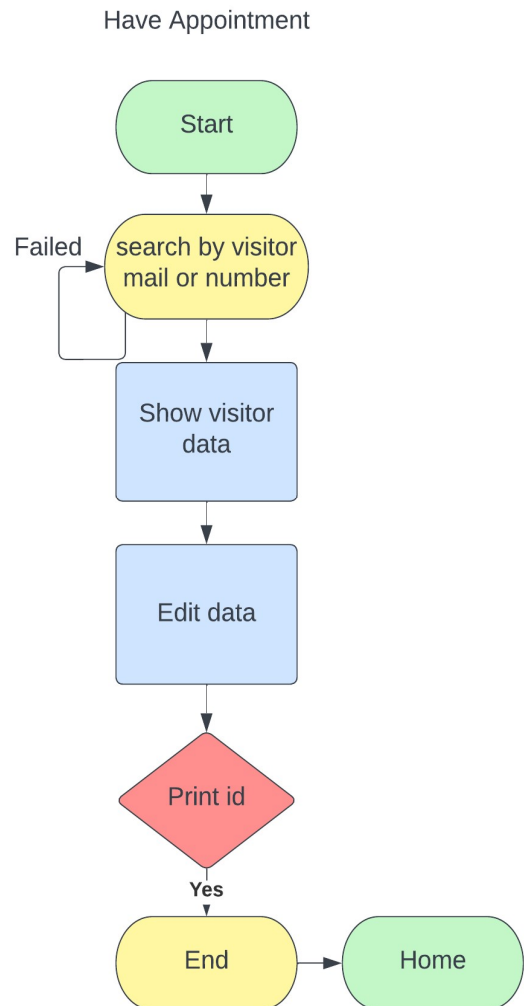


Figure 3.4.2: Have Appointment

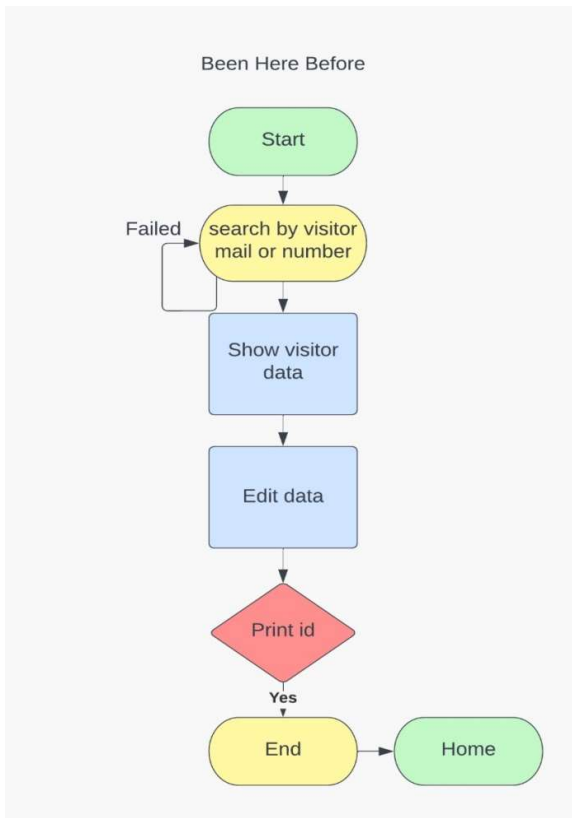


Figure 3.4.3: Been here before

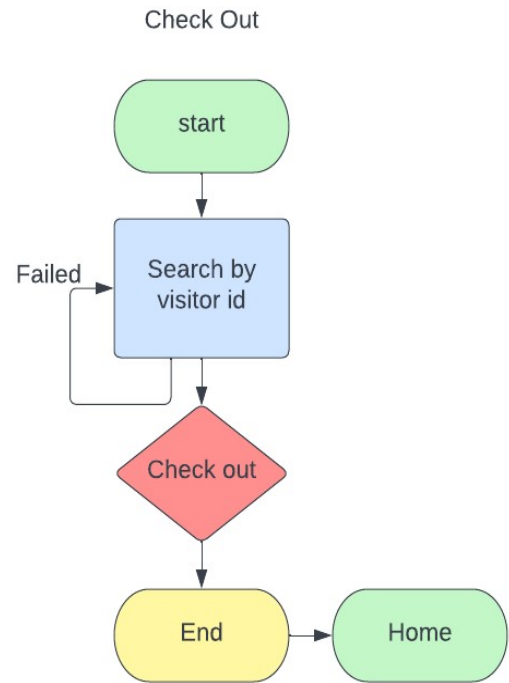


Figure 3.4.4: Check out

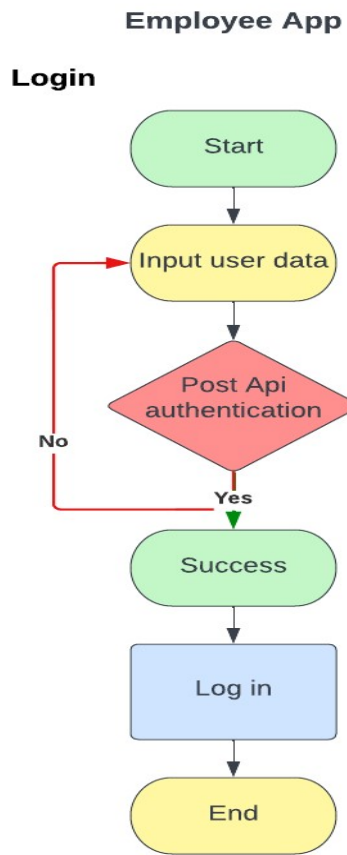


Figure 3.4.5: Employee app login

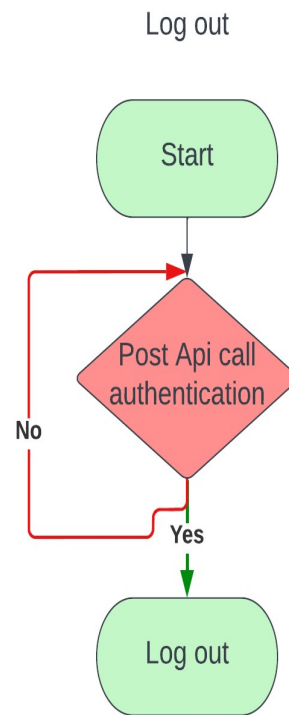


Figure 3.4.6: Log out

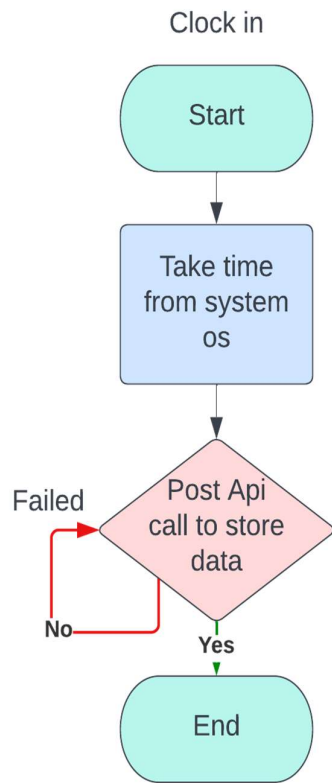


Figure 3.4.7: Clock in

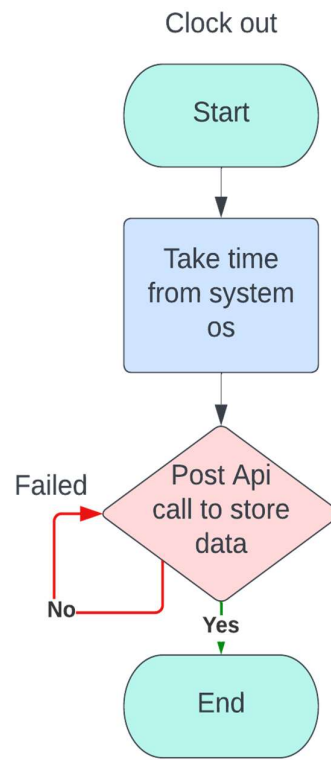


Figure 3.4.8: Clock out

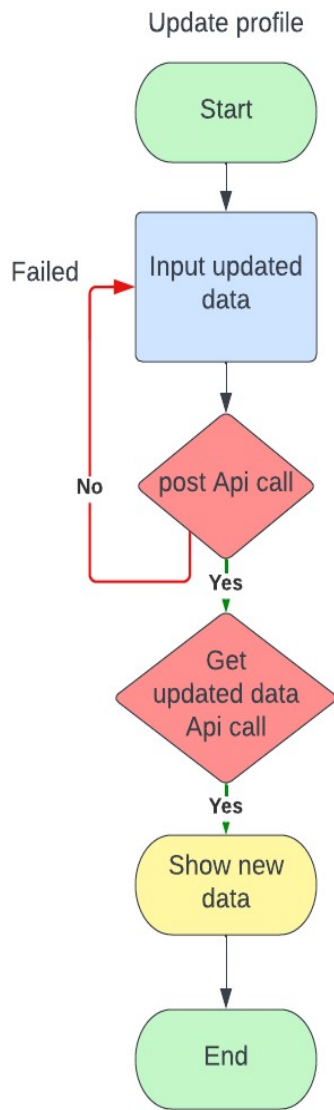


Figure 3.4.9: Update profile

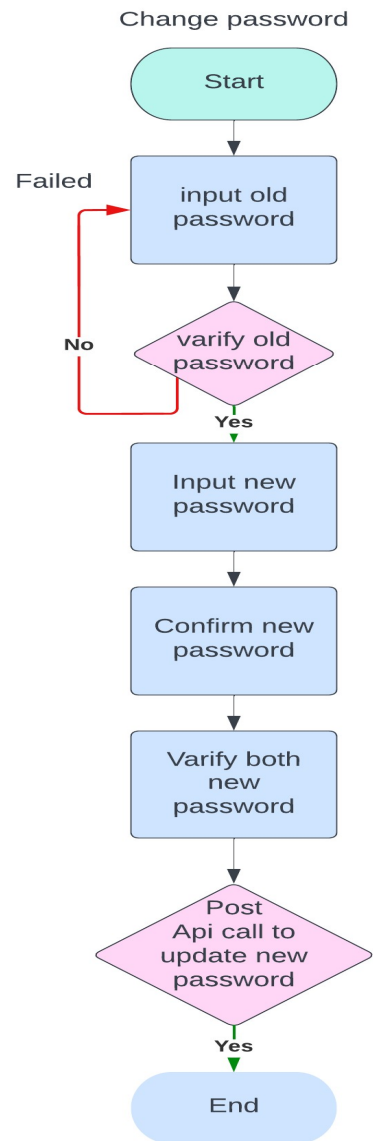


Figure 3.4.10: Change password

Accept/Reject visitor

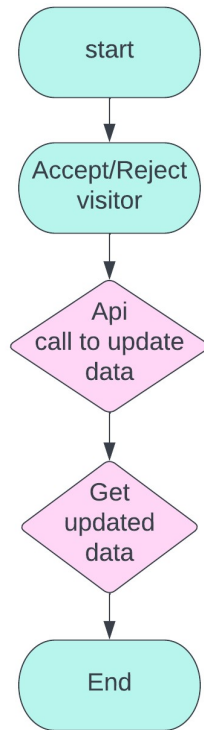


Figure 3.4.11: Accept/Reject visitor

Create pre Register

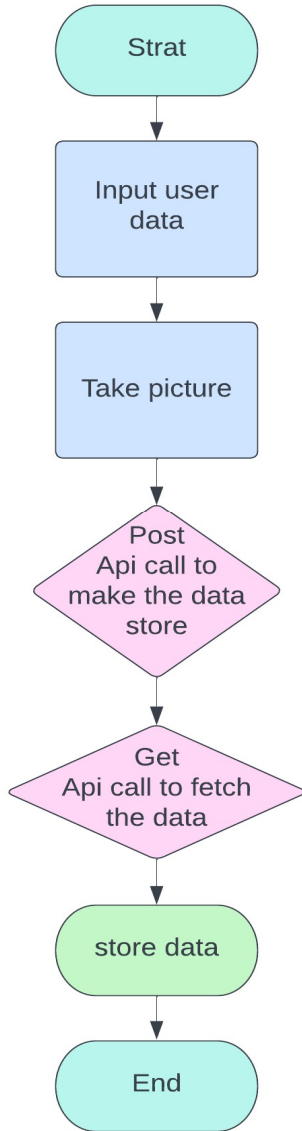


Figure 3.4.12: Create Pre-Register

Update pre Register information

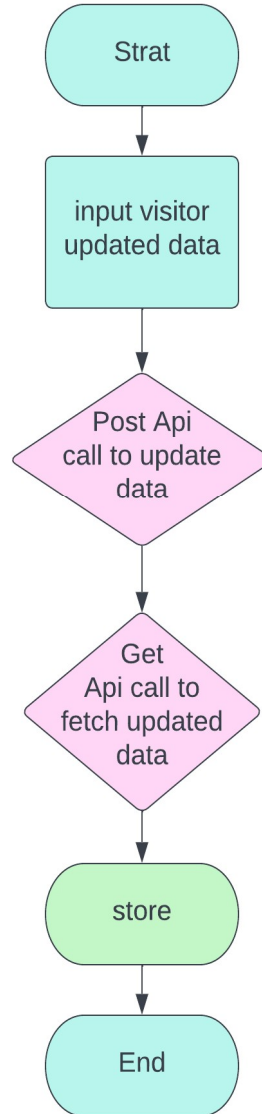


Figure 3.4.13: Update Pre-Register information

3.5 Design Requirement

Design requirements are the actions taken to put into effect an idea, strategy, plan, model, detail, standard, or method.

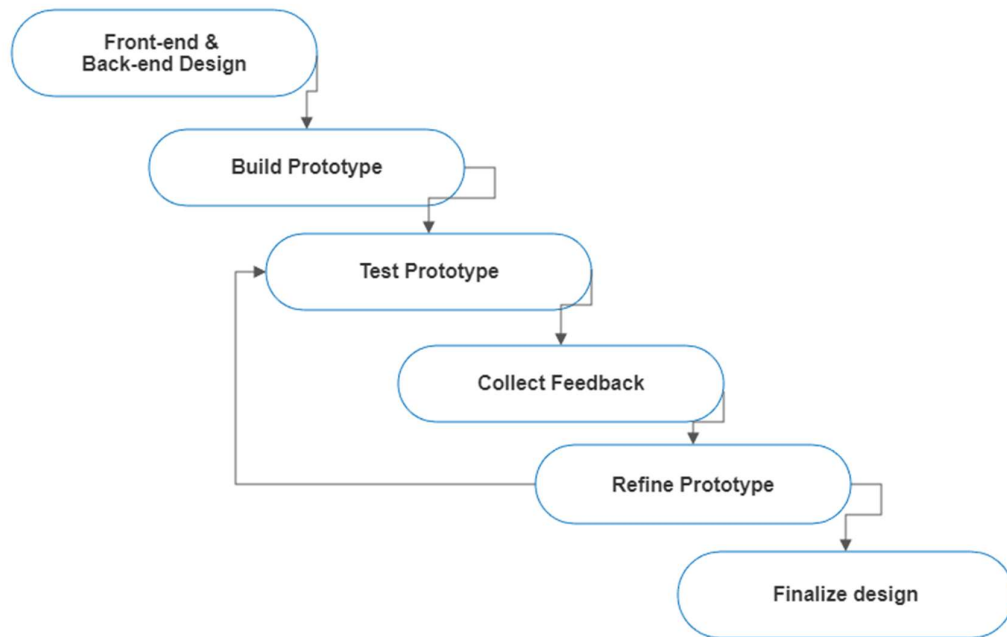


Figure 3.5.1: Design Requirement

CHAPTER 4

Design Specification

4.1 Frontend Design:

Front end design is everything that we see's or interacts with when we visit or open an app or a website. Front end has mainly two different Parts: 1. Graphic design 2. User Interface. Both of it created independently. Widely Used front end languages are HTML, CSS, and JavaScript. The frontend proficiency normally goes through a few different faces of development and the creation of wireframes like (rough outlines), prototypes (working examples), and finally user testing. There are two types of front-end we have first one is web front end for Admin Panel And the second one is for Mobile Front End. [3]

4.1.1 Web Frontend:

We know it from the beginning of this chapter that frontend represents that the user interacts with. Here in web front-end we use frontend to create an admin panel. By this admin panel we can control the full application easily. To create this frontend we used HTML, CSS, Bootstrap (Framework).

HTML: Html represents to Hyper Text Markup Language. It is the Basic & fundamental way to create a face of a web browser. HTML receives documents from local storage or web server and display it on the web browser. It defines a basic structure of a web page on how it should look. HTML can be used with all versions of browser along with the older browsers. It has a restriction that the web page is static. That means the content can't be changed. In our application we use it to create a basic structure.

CSS: CSS represents to Cascading Style Sheets. CSS is mainly used to design a website. Like by using CSS anyone can decorate a webpage, including colors, layout, and fonts. It can allow to present different types of devices at a time along with different types of screens. It can be used as XML based markup language. We used CSS for the basic design of our web frontend.

Bootstrap: Bootstrap is the most famous and widely used CSS framework. It includes Bootstrap offers a collection of vocabulary for template designs and is designed to enable responsive construction of mobile-first websites. We use bootstrap in our application to create forms, buttons, dialog boxes, progress bars and so on.

JavaScript: JavaScript is a high-level programming language. It's best known as a scripting language for web pages, but it's also used in many non-browser environments, including Node.js, Apache CouchDB, and Adobe Acrobat. We use it to make our application more functional and easier to use. Js is a dynamic language. So, it is easy to make the content modification.

jQuery: It is lightweight, fast, small, and feature-rich library of JS. It helps JS to run more comfortably in websites. jQuery do a big task with a short line of code, make it as a method that can call in a single line. In which JS need too much to do so. It is designed to make frontend development much easier. We use it in or application to make it more easily and comfortably.

4.1.2 Mobile Frontend

Mobile Frontend is the "client side" of an application is what the term "client" refers to in most contexts. Everything that the viewer/customer sees while engaging with the website or app is part of the frontend, including the text, images, charts, tables, menus, buttons, and background colors. To create our mobile frontend er use Flutter, Dart and material Ui design pattern.

Flutter: Google's Flutter is a portable UI toolkit for developing natively compiled applications for mobile, web, and desktop with a single set of code. Flutter is open source, compatible with preexisting code, and widely used by developers and businesses around the world [4]. It is a cross platform-based application for Android, iOS, Linux, macOS, Windows etc. So basically, we used flutter because It's a hybrid method. By using the same method, we can develop an application for different platforms.

Dart: Dart is a fast, cross-platform, and client-optimized programming language for making apps. It aspires to provide the most productive programming language for cross-

platform development along with a highly customizable runtime environment for application frameworks. Flutter is based on dart. It is also created by Google.

Material Ui: Material Ui is a design architecture introduced by Google. This library is an open-source of React components that use Google's Material Design [5]. It comes with a large number of preassembled parts that can be used in production without any additional work. In our application we followed material Ui architecture. We used it for theming, motion and recommendation in our application.

4.2 Backend Design

The back end of a program or application is the portion of the code that is essential to its functioning but is inaccessible to the user. The back end, often known as the server side, consists of the server that delivers data on demand, the application that routes it, and the database that stores and organizes the data [6]. A customer interacting with the front end of a website is doing something like browsing for something. There are three major parts in back-end. They are App, Server and the Database. And the Widely used Back-end languages are PHP, Ruby, C# and so on.

4.2.1 Web Backend

We know earlier that backend is a server site programming language. We use My SQL, Rest API, PHP and PHP's framework Laravel in our back-end.

PHP: PHP stands for: Hypertext Preprocessor and is a server scripting language that used to create dynamic and attractive web pages. As an open-source scripting language, PHP has found widespread usage. The server is responsible for running PHP scripts. PHP allows for the creation of dynamic web content. PHP has the ability to manage files on the server in many ways. Processing forms in PHP allows for the collection of data. PHP is able to send and receive cookies. PHP has the ability to create, delete, and edit records in your database. Limiting access to certain files or directories is a simple matter of using PHP. Encryption is possible with PHP. We basically used PHP and its framework to add the admin panel functionality.

Laravel: Laravel is a framework of PHP. Using its significant and smooth syntaxes, Laravel is a web framework built on the PHP language that can be used to create high-end online applications. It provides the application's architecture and comes with a comprehensive set of tools; additionally, Laravel handles the application's security. By making routine activities like authentication, routing, sessions, and caching easier, Laravel aims to reduce the pain associated with development. Without sacrificing application functionality, Laravel attempts to make the development process enjoyable for the developer. We used it for admin panel, connect view, logic view.

MySQL: MySQL is a popular technology for managing relational databases. MySQL is suitable for both large and small applications. MySQL is extremely quick, dependable, scalable, and user-friendly. MySQL is platform independent. MySQL conforms to the ANSI SQL standard. MySQL was launched for the first time in 1995. Oracle Corporation develops, distributes, and supports MySQL. Massive sites such as Facebook, Twitter, Airbnb, GitHub, and YouTube, among others. We use MySQL to create our database.

REST API: It is possible to connect with RESTful web services through an API that follows the guidelines of the REST architectural style, known as a REST API (or RESTful API). Roy Fielding, a computer scientist, developed a protocol called REST (representational state transfer) [7]. REST APIs allow a great level of flexibility, which is one of their main advantages. Data is not linked to resources or methods; therefore, REST can accommodate many call types, return diverse data formats, and even change fundamentally with the proper implementation of hypermedia. We use REST API to connect the application with the backend.

4.2.2 Mobile Backend

Here we will discuss about REST API, Local Storage & State Management.

REST API: Rest mobile APIs are currently crucial development tools because they provide business operations more flexibility. Multiple applications may make use of the same capability. Additionally, they facilitate software services' simple scalability. RESTful APIs improve Internet-distributed web and mobile applications overall [7].

The scalability and ease of modification of mobile applications both increase. Application programming interfaces (APIs) built in the REST architectural style allow users to get and manipulate data through HTTP requests. The information may be read, updated, created, or removed from a resource through the GET, PUT, POST, and DELETE methods.

Local Storage: Local storage may refer to a hard disk drive, a data storage device that uses stiff, quickly spinning disks covered with magnetic material to store and retrieve digital information. It's a technique for storing information in a web browser, namely as a set of key/value pairs on the client's machine. Until the user deletes it from their browser, the information will be there permanently. No matter how many times the user closes the tab or window, it will remain active. We enlist local storage for data caching to increase app speed and give a better user experience.

State Management: The adoption of a Design Pattern known as "State-Management" allows us to keep all of an application's moving parts in sync with one another and with the application's state. Service deployment and processing of database-sourced data are simplified with this design pattern. When state management is in place, data move freely between app and the state. Data is in a safe and familiar place. These solutions for managing the current condition also provide a complete data snapshot at a certain moment. In this approach, save time and effort searching for information by knowing exactly where it is stored. Flutter app development relies heavily on state management since it allows us to concentrate all UI states and regulate data flow. For the purpose of short-term data persistence, software applications often make use of a database designed specifically for state management. Offloading state data to the database is a viable alternative to caching it in RAM, allowing applications to use less RAM at runtime without sacrificing functionality. [8]

4.2.3 Benefits of State Management

- We don't have to go to several locations only to get to the same data because the application's whole state is stored in one place.
- It lessens the number of HTTP requests dispatched to the server to acquire the data.

- The request will be sent to the server only if there has been a change to the data or if new data is being added.
- We will use the RX.JS library to accomplish two things: transmit data to the server to be stored in a database, and update the application's state in general.
- With State-Management, not only is code centralized and easily maintained, but the quality of that code is also enhanced; it is smaller and easier to understand.

4.3 Interaction Design and User Experience (UX)

UX design creates products that provide people meaningful and relevant experiences. UX design includes branding, design, usability, and function when purchasing and integrating a product. Ultimately, the goal of UX design in business is to "increase client happiness through the utility, convenience of use, and delight offered in the engagement with a product," as one UX designer put it. Now let me show my application's interaction design and user experience (UX):

Log in section: This is our employee's login panel. Admin create profile of employee from backend. And the employee logs in from here using the email and pass set by the admin.

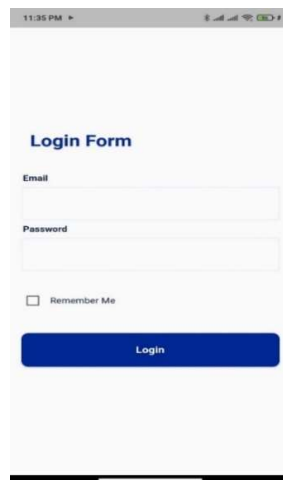
A screenshot of a mobile application's login section. The screen displays a white background with a blue header bar at the top showing the time 11:35 PM and signal strength. Below the header, the text "Login Form" is centered in blue. Underneath, there are two input fields: "Email" and "Password", both with light blue borders. Below the password field is a checkbox labeled "Remember Me". At the bottom of the form is a prominent blue button with the word "Login" in white text. The bottom of the screen shows a black home indicator bar.

Figure 4.3.1: Login section

Display Section: This is our main display section. Here we can see the total number of pre-registor's and total visitors. There is another functionality in the page we can accept and decline the request from the user given by the user app.

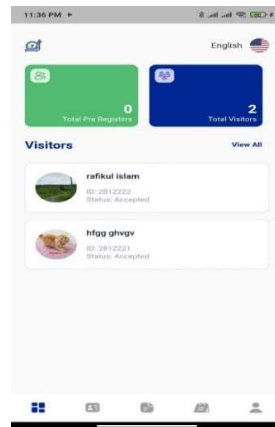


Figure 4.3.2: Display section

Pre-Resistor Section: In that section employee can add pre-register client and also client can send req if he/she login once.

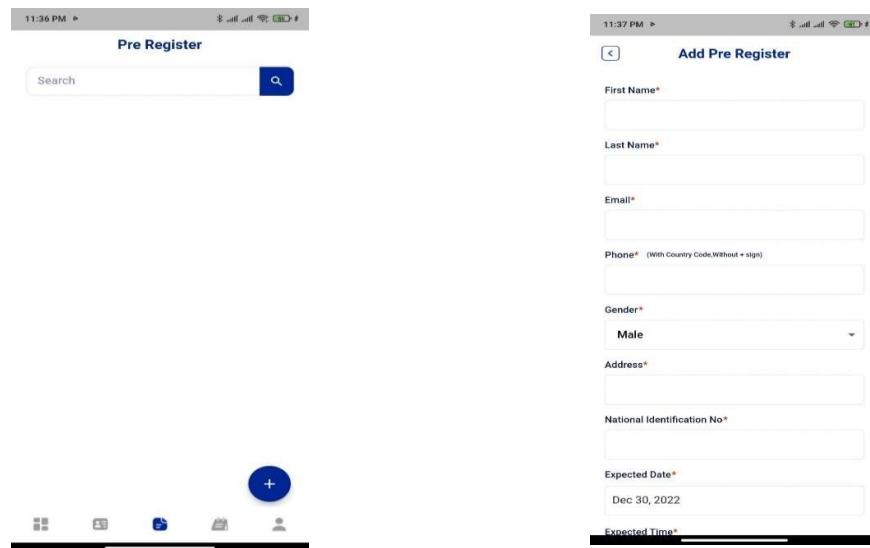


Figure 4.3.3: Pre-Resistor section

Edit Section: Employee can modify each and every information regarding the client.

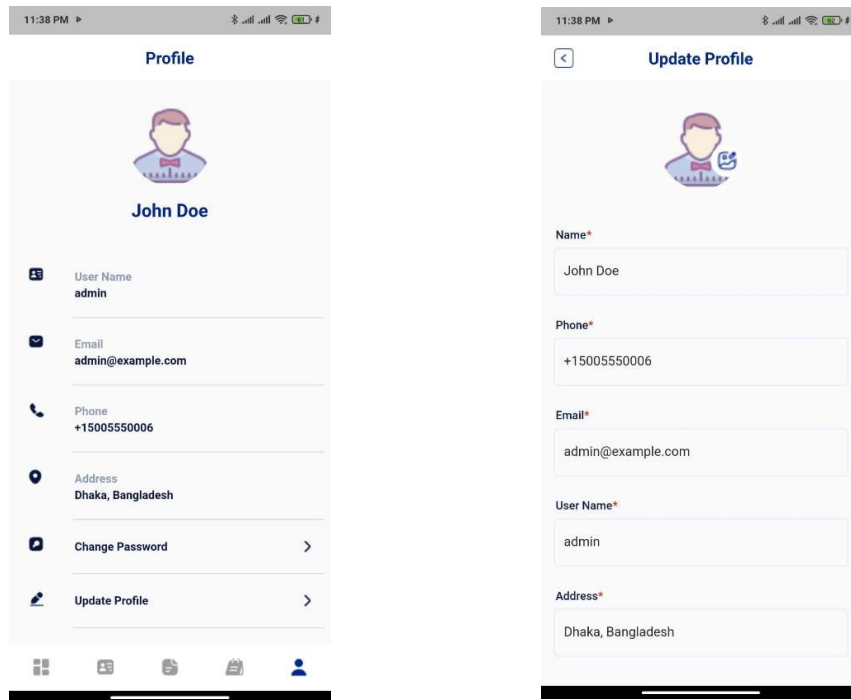


Figure 4.3.4: Pre-Resistor section

Attendance Section: In this section employee can give their attendance.

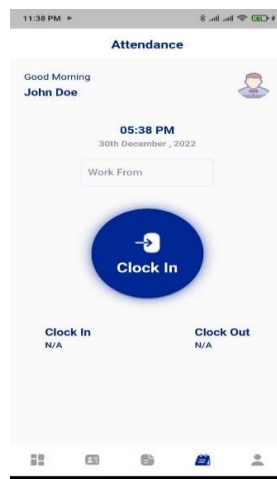


Figure 4.3.5: Pre-Resistor section

Profile Section: In this section admin can change his/her password (if there was a permission from backend), update profile and there is a logout option.

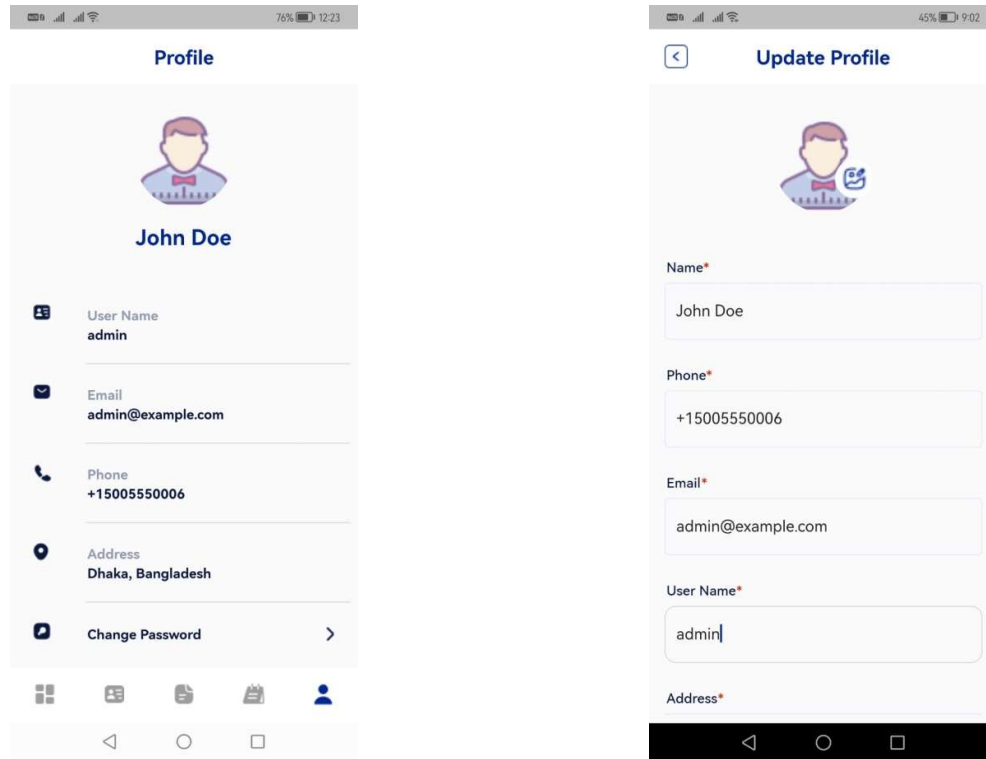


Figure 4.3.6: Profile section

4.4 Implementation Requirements

The accomplishment of a plan, concept, design, specification, method, or policy is known as implementation. Now let's talk about the phases of implementation.

- **Estimate the Project Plan:** The initial part of a project's life cycle is best spent creating a plan that satisfies management, clients, and other important stakeholders. Review the strategy and make sure everyone is on the same page about the project's goals and objectives before getting started.

- **Execute the plan:** Now that both of team members is on the same page and knows what is expected of them, the team can dive into the project. Keep an eye on the availability of materials and compare the actual time spent on the project to the estimated time so that you can be sure your team has all it needs to finish the task.
- **Make changes as needed:** During the course of any project's execution, the team leader will likely need to make adjustments, whether to accommodate the client's changing priorities or to ensure that the project stays within its original parameters. So we should make these changes as needed, using the project plan for guidance.
- **Gather feedback:** There are certain actions that must be taken once the team has finished the project deliverables. Evaluate how well the project went according to plan and where adjustments need to be made by soliciting input from the project team, clients, and stakeholders.
- **Make a Final Report:** In the final stages of implementation, reports should be sent to the project leader & clients detailing the project's actual performance in comparison to the planned budget and timeframe.

CHAPTER 5

Implementation and Testing

5.1 Implementation of Database

The purpose of your database is to build a clean architect database so thus it's easy to implement with the view and logic. Making a clean database can help us to make our project more robust, implementing new feature in the future can be easy.

For our application, we used MySQL and Firebase as our back-end database functionalities. For because it is easy to integrate. At first, we make a database using MySQL. For our mobile application we fetch/get the data using API, and we created model from the response from API and used it where it's needed in our mobile application. And for the web back-end we directly take the data from database.

5.2 Implementation of Front-end Design:

The user interface, or front-end design, of a program is a crucial first step in its development. The efficiency and convenience of a program's interface directly affects its usefulness. That being said, we choose to utilize Android Studio as our integrated development environment (IDE). As much as possible, we aimed for a minimalistic and streamlined design across our whole software. Things we utilized.

- Software & IDE
 - Android Studio
- Programming Language & Frame Work
 - Flutter
 - Dart
 - HTML
 - CSS
 - Bootstrap
 - Java Script
 - jQuery
 - Material UI

5.3 Testing Implementation

We aimed for simplicity in the design of the app's user interface in order to maximize its usability and facilitate user interaction. The whole program has a user-friendly layout that requires little to no training to operate. We made an effort to tailor the features of our software to maximize its usefulness in terms of user experience.

5.4 Test Results and Reports

5.4.1 Mobile Apps

Installation and performance

Table5.4.1.1:

Test Id	Test Case	Test Data	Pass/Fail	Status of bug	Date
1	Is the application perfectly run on both android and IOS?	Runs smoothly	Pass	N/A	
2	Is the application user interface responsive in different mobile screens sizes?	Responsive, does not show any error.	Pass	N/A	
3	Is the application runs on device that has low configuration	Runs smoothly	Pass	N/A	
4	Is the application crashing while installing?	Did not crashed	Pass	N/A	
5.	If providing a valid login credential, does the application allow users to login?	Let's user login	Pass	N/A	
6	If providing an invalid login credential, does the application allow users to login?	Did not let user login	Pass	N/A	
7	Does the application let's user logout when they press logout?	Let's user to logout	Pass	N/A	

5.4.2 Visitor app

Table5.4.2.1:

Test Id	Test Case	Test Data	Pass/Fail	Status of bug	Date
1	Is the check in module works for users while submitting their information	Yes, let's user to check in without issues	Pass	N/A	
2	Is have appointment works if a user had completed pre-register before	Yes, does not show any error	Pass	N/A	
3	Is the been here before works if a used had previous check in record in the system	Yes, does not show any error	Pass	N/A	
4	Is the check-out works while passing visitor id	Yes, Let's user to checkout	Pass	N/A	
5	While checking, does the camera open and take pictures?	Camera opens and take pictures	Pass	N/A	
6	Does the print visitor module work while connected to a wireless printer?	Yes, perfectly print the visitor id card	Pass	N/A	
7	Is the localization works when change the language from English to Bengali or Bangla to English	Yes, works perfectly	Pass	N/A	
8	Does the application get stuck after taking the picture from the camera?	No, it does not get stuck	Pass	N/A	

5.4.3 Employee App

Table 5.4.3.1:

Test Id	Test Case	Test Data	Pass/Fail	Status of bug
1	If providing a valid login credential, does the application allow employees to login?	Let's employee login	Pass	N/A
2	If providing a invalid login credential, does the application allow employees to login?	Did not let employee login	Pass	N/A
3	Does the application let's employee logout when they press logout?	Let's employee to logout	Pass	N/A
4	Does the attendance module (Clock in/ Clock out) works for employee app	Yes, without any error	Pass	N/A
5	Is data updated in the employee app whenever there's a new visitor?	Yes, instantly it gets updated	Pass	N/A
6	Can an employee Reject or Approve a visitor from the app?	Yes, employee can without any error	Pass	N/A
7	Can an employee make a checkout for a visitor from the app?	Yes, employee can make checkout from the app without any error	Pass	N/A
8	Can an employee pre-register from the app?	Yes, without any error	Pass	N/A

9	Can an employee do edit/update in pre register's information	Yes, can make edit or update	Pass	N/A
10	Can an employee delete / remove a pre-register from the app?	Yes, can delete / remove	Pass	N/A
11	Is taking pictures of visitor works in this app?	Works perfectly fine	Pass	N/A
12	Can an employee change password?	Can change password	Pass	N/A
13	Can an employee update profile information?	Yes, can update profile information	Pass	N/A

CHAPTER 6

Impact on society, Environment and sustainability

6.1 Impact on society

Our apps will play an important role on society. Now a day it is not so easy to set an appointment. By using our apps now, you can easily set an arrangement to do something or appointment someone at a particular time and place. With our apps they can request for appointment from anywhere any place using smartphones and It will save our time and money. You can request for visitor pass or pre-register. Set check in and check out time.

We believe that our application can Secure your organization from unauthorized access.

Let's create a secure society.

6.2 Impact on Environment

Main target user of our application is several institutions such as university, office, mill factory. Usually on a printed piece of paper on which office visitors have their names, along with some other relevant details including photograph, NID number. It's either that or a sticky label that the visitor sticks to their clothing. Our app not only reduces stress and manual labor at your front desk but also increases efficiency, transparency and improves scalability. Increase security and control access by identifying visitors and contractors entering the facility.

Our app was originally meant to hold information, but most often the information goes unverified. Whenever someone enters a premise they are requested to fill up with their information, and there is no verification done to ensure that the provided information is true or not. Our main motive increase security and control access by identifying visitors and contractors entering the facility. [9]

6.3 Ethical aspects

Design is one of the primary ways people choose which apps they will use regularly and which mobile and web apps they won't use again. We use mobile and web applications daily in almost every facet of our lives. Apps are used to find services connect with people, and so much more. Businesses use apps to connect, build their brand reputation and services.

That's why we make our app design user friendly with Simple Navigation.

Our app doesn't collect or share any user data. Not data shared with third parties. And our app doesn't collect user data. so, you don't have to worry about privacy.

Our main priority is security to secure our user information we use API Authentication. No unauthorized user can't enter and stole data. To entry we need to access code from API and then we can access to the data.

6.4 Sustainability Plan

We are motive to give long time support to our system. That's why we plan a roadmap for achieving long time goal to continue the program. Our main target is sustainability of relationships between organizations and the sustainability of services. We will fidelity monitoring, use analysis to improvement. If any bug or problems happened client can submit a ticket, we will respond it as soon as possible and try to fixed it. We are hoping that we can give a long-time service. If they need any modifications or update, we will provide them. User security is our main priority we will provide update patch security to secure our user data.

CHAPTER 7

Conclusion and Future Scope

7.1 Discussion and Conclusion

The process of trying this out was both spectacular and educational. Through the course of this project, we were exposed to the many facets of the software development life cycle. We felt like we were in the development sector because to the adrenaline and pleasure we had when solving a variety of problems. We put in many hours from the start to make sure this app turns out exactly as we envisioned it.

There is optimism around our efforts. If our users are helped by our software, we will have accomplished our goal.

7.2 Scope for Further Developments

Additions to our project's features and content might significantly improve its usefulness to users. In order to make the system more usable, we intend on implementing some new features and rebuilding all of the existing ones with additional functionality. Following is an explanation of some of our objectives.

- QR code scan
- Chat box
- Reminder

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