

**“POCKET MEDICINE”: AN ANDROID-BASED MEDICINE MARKETING
APPLICATION FOR SELLER COMMUNITY**

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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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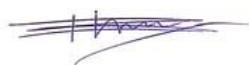
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APPROVAL

This Project titled “**POCKET MEDICINE: AN ANDROID-BASED MEDICINE MARKETING APPLICATION FOR SELLER COMMUNITY**”, submitted by **Md. Shamsul Alam, Jannatul Ferdous** and **Mitu Mony** 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 4th January, 2022.

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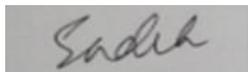


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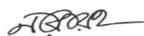
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DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Mr. Narayan Ranjan Chakraborty, Assistant Professor, Department of CSE** Daffodil International University. We 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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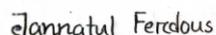
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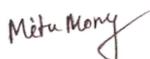
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ABSTRACT

We develop an Android trade-based marketing application to establish a relationship between a shopkeeper and a pharmaceutical company. Its primary function, the pharmaceutical company's medicine, which has arrived to the store, will include a list of all types of drugs. Different companies will sell and marketing their drugs whenever they want through our Android application, recently without any SR / MR (Note: Someone mentioned SR or MR. SR stands for sales representative. MR stands for Medicine Representative.) 2 panels are going to be available in our application. Any user will access our application as a result of it presently lacking an admin panel. Generate and manage users— using the Google Admin app, can reset passwords, edit profiles, add drugs photos, details, prices, post profile images, remove users, and suspend users. They will perform key admin duties as an administrator using the Google Admin app on one's robot's mobile device. A user can place an order, and this message is sent to the admin panel, where an admin approves the order for delivery. The user panel is only accessible to the user. Through the user panel, the user will manage their account. Our application includes a password option, allowing users to log in using their passwords. Furthermore, the company will play an important role for users. The company will provide their medications in accordance with the needs of the users. This category option will come in handy when it comes to selecting the appropriate medication. Our app has limitations as well. If we don't have more medicines in stock, it will be a disappointment to the seller in an emergency. Essentially, this app is created for sellers so that they can easily be ordered any type of medicine or supplement at any time.

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CHAPTER 1: INTRODUCTION

1.1 Introduction

In Bangladesh, there are fake medicine is every, even in every shop. The main cause of this fake medicine supply. In front of Midford Hospital there, selling medicine at a cheap price, which is maximum medicine, is fake medicine. In other cases medicine company, sell their medicine at a very high price compared to the Midford Hospital Medicine Market. Again, sometimes SR/MR do not come in proper time even in 1 or 2 weeks later. Overall Consideration Medicine shopkeeper disagrees to buy medicine from the company. From the Concept of We decided to create a trade base Android application “pocket medicine” for establishing a relationship between a shopkeeper and a medicine company. There will be a company department and a sales department. Whenever the product is needed, the seller will be able to order the drug and it will be transferred to the list of companies. The deliveryman will deliver the listed medicine from the company according to the location of the store. In this way medicine carrying cost is reduce. Because there will be no SR/MR. In this case company can reduce their medicine price. We develop an Android application for establishing a business partnership between a shopkeeper and a pharmaceutical company. Its primary function. The pharmaceutical company’s app will feature a list of all kinds of drugs when it arrives in the shop. Different companies will offer their drugs whenever they wish using our Android application without any SR / MR. (Note: Someone mentioned SR or MR. SR stands for Sales Representative &MR stands for Medical Representative.) There will be a sales department as well as a company department. With his ID, password, and NID number, the seller will create an account. Vendors can accept payment using bKash, MasterCard, and ATM cards. The seller will be able to order the drug whenever it is required, and it will be added to the company. According on the store's location, the delivery man will deliver the indicated medicine from the company. Recommendation for the new drug.

1.2 Motivation

The app we want to build is primarily for business purposes. This application will act as a link between the vendor and the company. As a result, communication between

two actors would take place through this app (company and seller). The app may assist a seller in ordering any type of medicine in a matter of seconds. The vendor must authenticate his information by providing specific details, and the verification process will require an NID Card. Because there is a difficulty with payment. Furthermore, this app allows a seller to purchase medicine at a standard price, which is quite cost-effective for him. There is also a category option in this app. This category option will help you find the drug you need. That is the app's unique selling feature. This app also has a timer function. The app is a tool to help you perform better.

1.3 Objectives

- For an easier lifestyle.
- For increasing e-commerce popularity.
- For stop wasting extra time and money.
- For keeping pace with the time.

1.4 Expected Outcomes

- Our medicine sector day by day will be increasing faster from now.
- Many time for medicine delivery will be reduced.
- In this digital competitive world, we are growing one more step by this application.
- The price range will be reasonable for the seller.
- The seller will be capable to purchase medicine without any hesitation.
- Duplicate medicine will be reducing day by bay.
- The seller can buy only register company medicine. That's why he/she can buy comfortably and safely.
- Payment system will be easier and safe.

1.5 Project Management and Finance

The way a project [7] is developed and organized to produce an end product that will have an influence on an organization is referred to as project management [14]. It's where an organization's knowledge, skills, experience, and processes are put to use in

order to achieve its goals. Project management [14] is required for new projects that are time-bound, involve several partners, and require risk control. We have to pay 4000tk to add a logo to our app.

1.6 Report Layout

The purpose of our application, the goals and expected outcome of the Pocket Medicine, and the report layout are all described in Chapter 1. In Chapter 2, we also go over the background of our Android application, the research summary, the literature review, the system's challenges, and the problem's scope. We will need to know Java and XML programming languages in this section of Chapter 3, Requirement Specification. We will need an Android Studio, a logo, and an image, as well as information on the medicine, its pricing, and the company, as well as Google and Firebase's assistance. In Chapter 4, we contributed various frontend designs for our android application, such as the home page, login page, and menu page, to this design specification. We also added back-end and methodological design to the mix. We added several requirements for database, frontend and backend testing, device performance, client application performance, testing results, and publishing results in this section of Chapter 5. All of those notions are also examined. We describe what has happened in our society and how it has influenced our corporate environment in Chapter 6, influence on our society, the environment, and long-term viability we write several of the important portions' finishes in Chapter 7, near the end of the repost. Define the future scope of our plan, including where it should proceed in the appropriate direction.

CHAPTER 2: BACKGROUND

2.1 Preliminaries/Terminologies

While diving into development, we must first learn the fundamentals; only then will we be able to design greater things. We need to provide a solid foundation before we can start laying blocks on top of it.

Activity

An activity is a part of an application that provides a screen for users to interact with in order to execute tasks such as calling a phone number, taking a picture, sending an email, or seeing a map. Each activity has its own window in which to create its user interface.

Fragment

A Fragment represents a functionality or a component of the user interface in an Activity. A multi-pane UI can be created by combining numerous fragments in a single activity, and a fragment can be reused in multiple activities.

Intent

The Android ecosystem would be incomplete without intents. They're utilized to describe a task that needs to be completed. You can use intents to interact with components from the same application as well as components from other applications. Implicit and explicit intents can be distinguished.

Implicit intent

It declares a general action to be performed rather than naming a specific component, allowing a component from another app to handle it.

Explicit Intent

It names the component that should be used first. Because you know the class name of the activity or service you want to start, you will often use an explicit intent to start a component in your own project.

2.2 Related Works

In recent world and also Bangladesh marketing and also online base marketing is growing popular. Daraz, Hungrynaki, etc are popular in Bangladesh.

There will be different type of strategy of this app. But we create first time in Bangladesh for that idea. In other country of the world there will be different type of medicine marketing app like (The Medical Rep APP for the pharmaceutical reps).

2.3 Comparative Analysis

All others apps [15] there are relation between seller and buyer but in our application there are relation between company and seller. Common people can't buy medicine from our application because it's a one kind of marketing app.

In our application there will be engage with the medicine company that's why there will be no chance for duplicate medicine on the medicine shop. In all other application, there will be no verification about duplicate product.

- Pocket Medicine is very different from any other app on the market. Users can Order medicines or supplements through several applications and websites.
- The administrator can manage orders.
- Our app establishes a connection between the seller and the company.
- Our app provides a verification feature, so sellers don't have to be concerned About security.
- Typically, MR/SR receives the order from the seller and forwards it to the company.
- Because of our app, the company no longer has to worry about MR/SR.
- Because of our app, the company no longer has to worry about s MR/SR.

2.4 Scope of the Problem

Fragmentation of Software

Every year, Google releases a new version of Android with various new features and improvements. However, the current version of Android is still lagging in terms of acceptance. As a result, when building mobile apps [15], developers must consider multiple Android versions. They frequently find it difficult to make the app make use

of the features offered by both the latest and previous versions of the Android operating system.

Language of Programming

At the moment, an Android app developer has the option of using one of two approved programming languages: Java or xml. Java is a well-known and widely used programming language. Choosing the correct programming language for Android app development is difficult for us.

New Business Module

Now a day's business idea about digital marketing are growing very hardly because of competitive world. Now we need to good, smart and unique idea for generating digital marketing area. Without creative idea we can't find our goal. It's too tough for us.

2.5 Challenges

- To generate idea was a challenge for us.
- Learn about java and xml programming language.
- Error find from code was another challenge.
- Distribute work.
- Work through the idea.
- Carefully UI deign.
- Added firebase was another challenging work.

CHAPTER 3: REQUIREMENT SPECIFICATION

3.1 Business Process Modeling

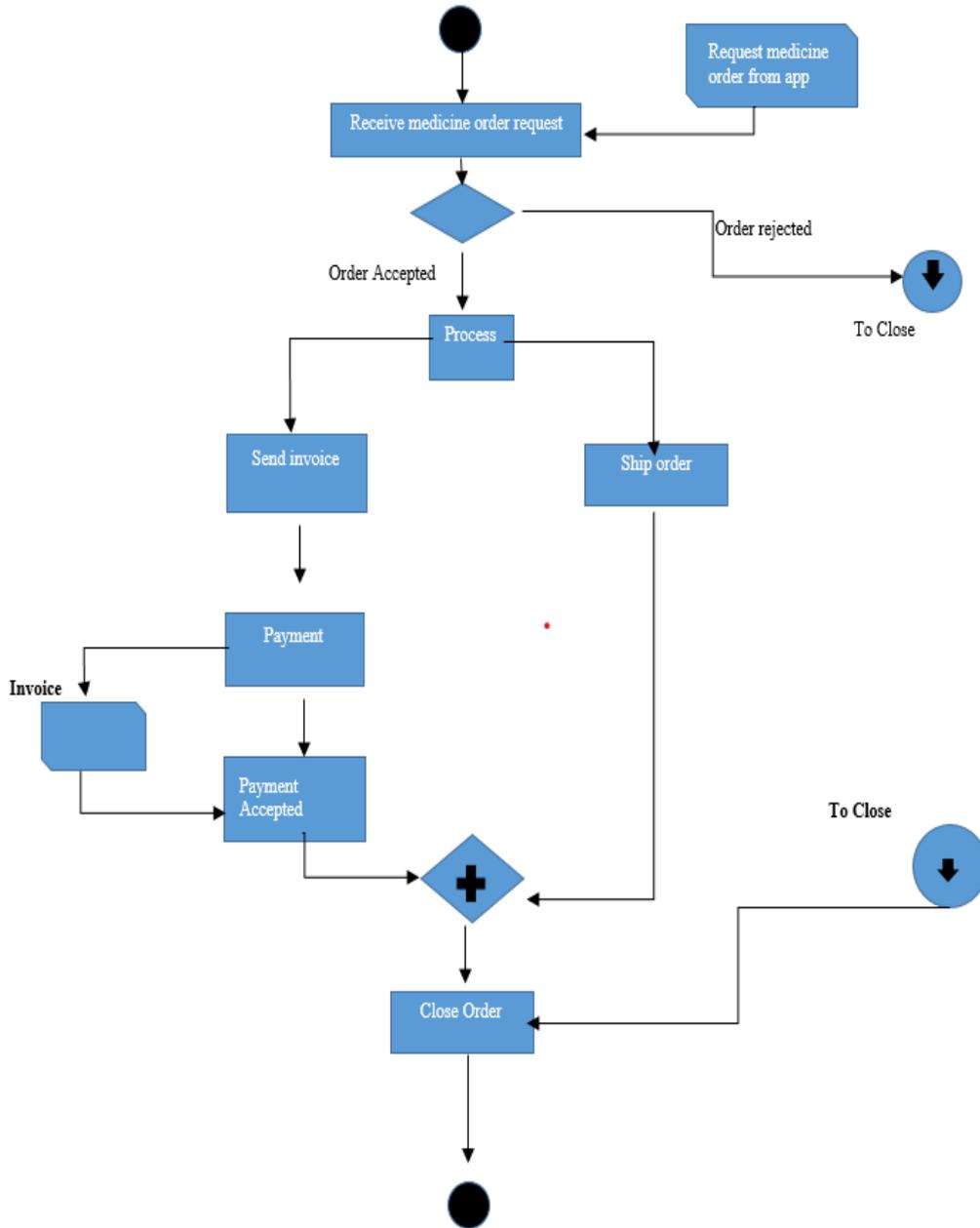


Figure 3.1: Business Process Modeling

3.2 Requirement Collection and Analysis

- There are many requirements for our android application. Here is some requirement given bellow:
- Collect information about medicine and company
- Download android studio.
- We need to know API version.
- We also learn about java/xml programming language.
- Shopkeeper review collection.
- Payment method analysis.
- Image and Logo for our application.

3.3 Use Case Modeling and Description

A use-case model depicts how various sorts of users interact with a system in order to solve an issue. As such, it explains the users' goals, their interactions with the system, and the system's required behavior in order to achieve these goals.

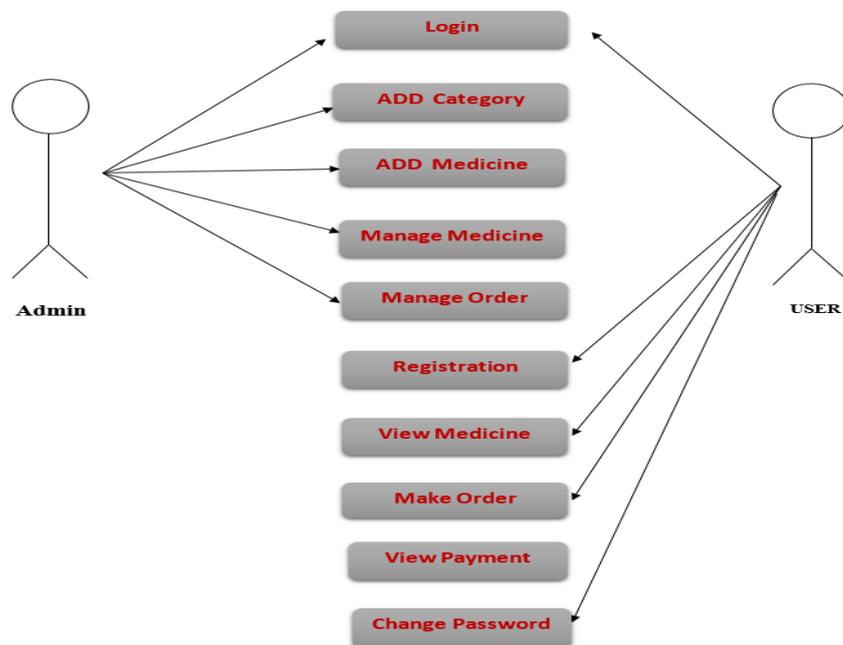


Figure 3.3: Use Case Diagram for Pocket Medicine App.

CHAPTER 4: DESIGN SPECIFICATION

4.1 Front-end Design

A mobile application's front-end design is incredibly significant. It's recognized because of the program (UI) (user interface). With this UI, a user can easily evaluate what form of the app it's. Furthermore, the computer program is the most noticeable aspect of any application. The front-end design is accessible to users. Front-end design refers to the section formed by front-end developers. The side refers to everything a user sees on a smartphone device, including the planning. The interface of a mobile app is just what the user sees. The term "user experience" or "UX"; the side is where the user can interact with this stuff. Understanding and being proficient in design is a crucial part of that. Unfortunately, genuinely comprehending front-end design is more difficult than it appears. The skill sets required for coding and aesthetic design are somewhat different. As a result, some front-end developers aren't as skilled in the design part as they should be, and their work suffers as a result. We have to spend a lot of effort into designing our front-end design as a beginner. We need to study a variety of subjects, feature of an android application.

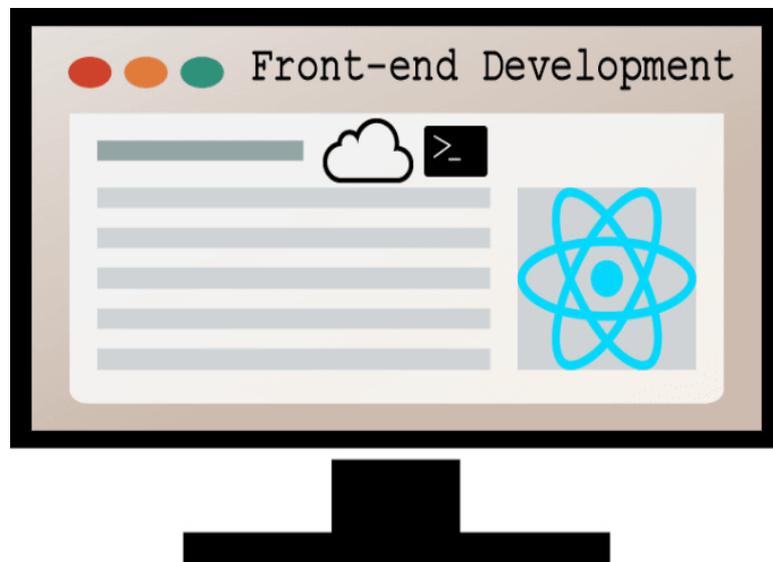


Figure 4.1: Front-end Design

4.1.1 Home page

The primary UI of our app is the home page. The home page is where users can find everything that meets their needs. Medicine, company, new arrival, payment, account, and contact us are some of the options on our home screen. By selecting the medicine option, the seller can purchase any medicine. With choosing the company option, the seller can purchase the drug they require from a list of companies. If new drugs are added to our app, a notification is sent to the seller so that the seller is aware of the new medicine. When it comes to purchasing drugs, the seller's payment choice is really useful. The account button can be used by a seller to create an account. Click the contact us option if the seller has any questions or wants to know if the drug they need is available.

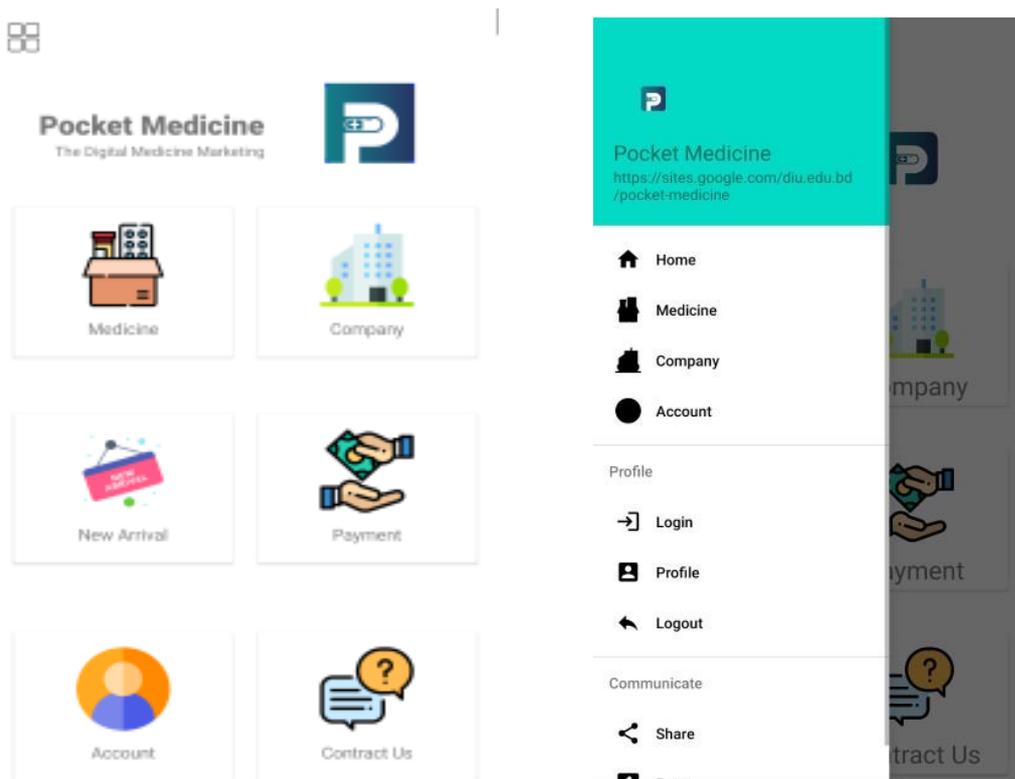


Figure 4.1.1: Home page

4.1.2 Login page

The login page is the most significant part for a user if anyone wants to log sure get the service of our app. Users who have already got an account can easily log in by providing their email address and a password. When designing or improving the app's login procedure, understanding user authentication [12] is absolutely essential. Otherwise, they will be unable to use our app's services. Any user who wishes to form an account must first register.

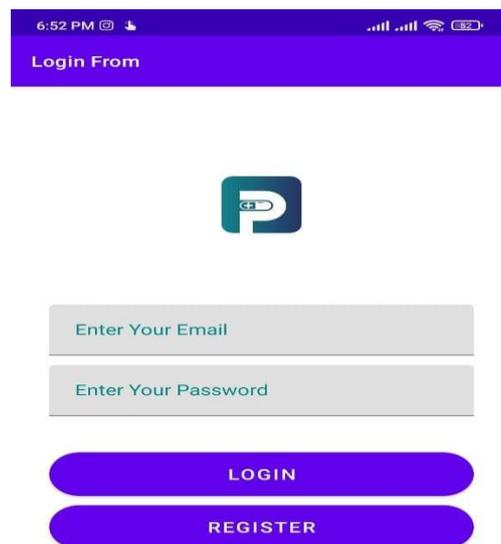


Figure 4.1.2: Login page

4.1.3 Register page

The register page is additionally a big area for a user to register. Users can join up for the service through this UI. Two-step verification has also been accustomed to secure user information. 2FA (two-factor authentication) is employed to guard both a user account and also the resources that the device is connected to. In our app, we also used OTP (One Time Password). A secure PIN code is going to be sent to the user via SMS or email, and it'll be valid for under one session. If they're unable to receive and ensure

the OTP code, they'll be unable to proceed with their account registration. They're going to not be able to get our app's services if this cannot be done.

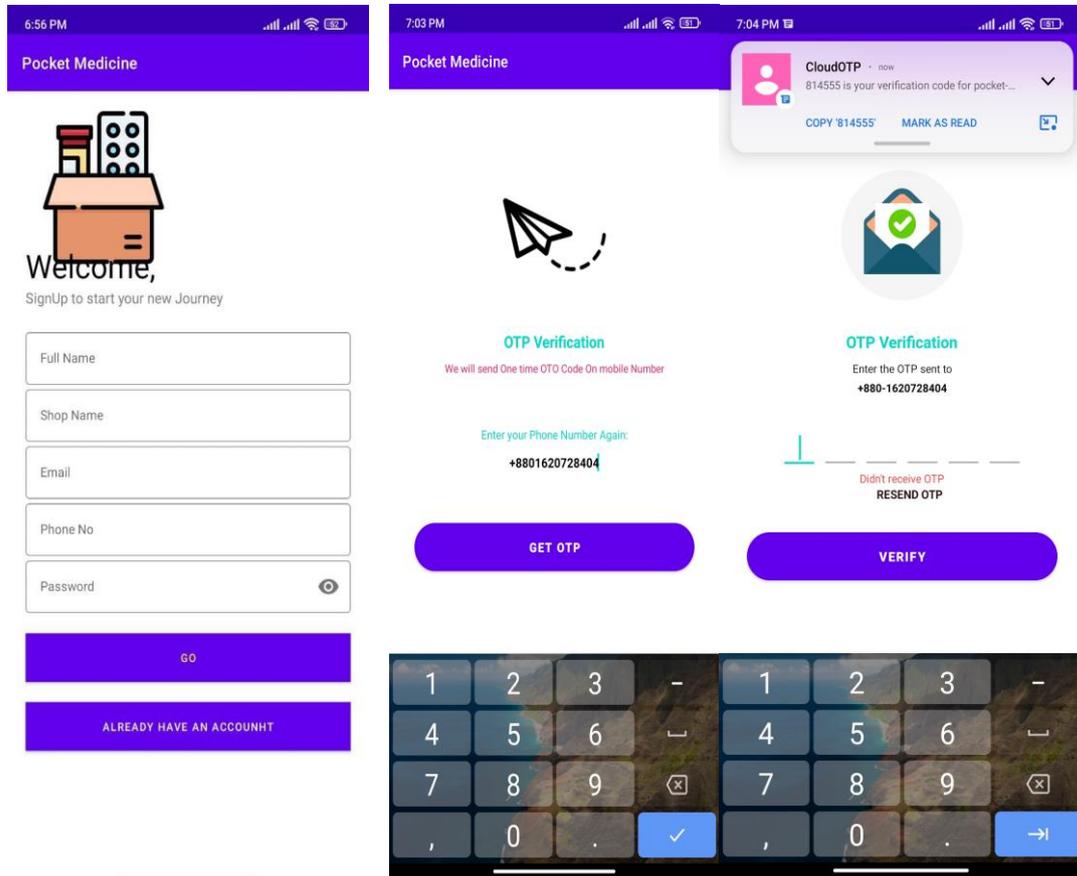


Figure 4.1.3: Register Page

4.1.4 Category page

The category UI is the most essential part of our application... The category is the page from which the user (seller) can choose their essential medicines via this UI. The categorization page's program is split into different sections like an inquiry bar, medicine name, type, name, price, image and also details. The search bar allows the user to search for drugs or an organization that he or she requires. The user has the choice of choosing the assorted forms of medications that he or she needs. The name of the drugs is extremely useful in assisting the user in selecting the suitable medication.

4.1.5 Order page

The order page is the app's most notable feature. The user can easily place their order using this UI. This UI allows the user to work out all of their orders.

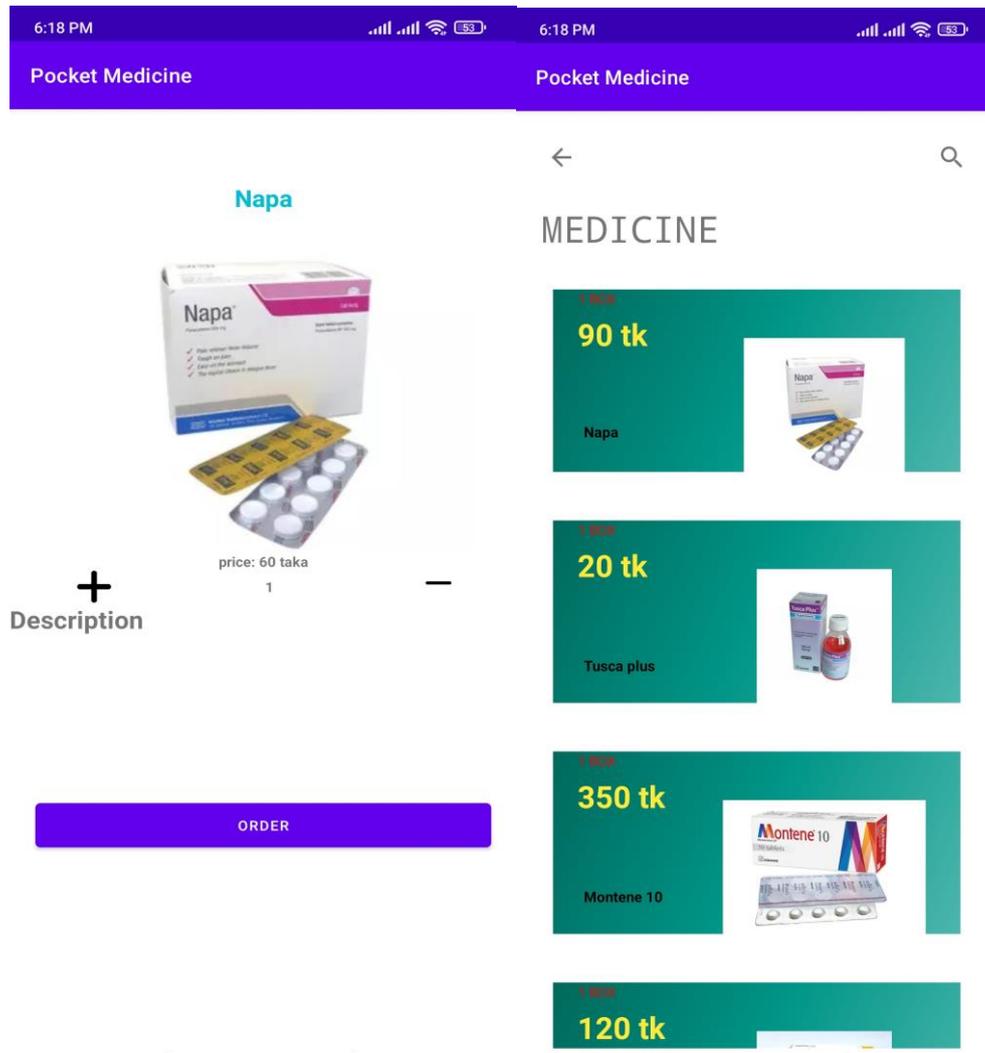


Figure 4.1.5: Order page

4.1.6 Payment

The app's most vital feature is the payment method's program. Users pay with cash, Bkash, and Nagad through this user interface.

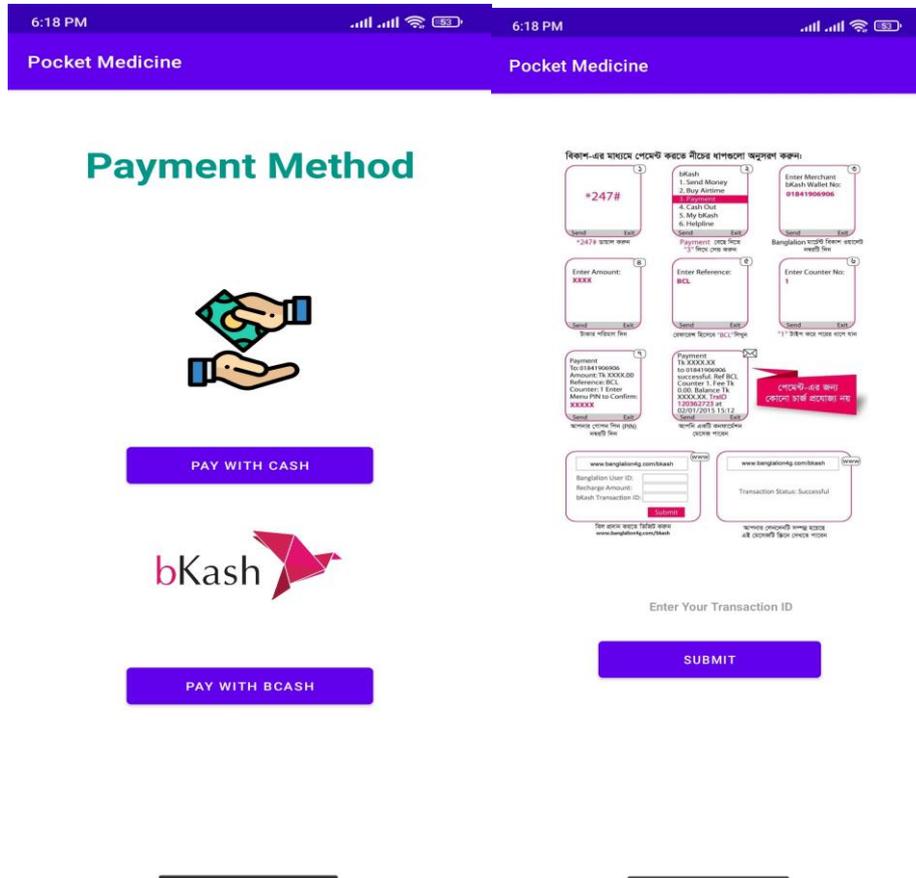


Figure 4.1.6: Payment Page

4.1.7 Contact

Users will find the contact page to be extremely useful. The user can contact the company and with the authority via this contact us, UI to find out if their required medicine is available. They can also give us feedback about their user experience about the Application. They can also provide their email and name into the feedback option and send.

4.2 Back-end Design

The most important aspect of any Android application's back-end design. The back-end developers create the designs. A user can access back-end designs through a front-end application at an identical time. The backend also includes activities like writing APIs, creating libraries, and dealing with system components without user interfaces, further as scientific programming systems.

The server side of an application, similarly to everything that communicates between the database and therefore the browser, is mentioned as back-end development. Developers utilize a sort of JavaScript referred to as Node.js for the backend development of android apps. This framework enables developers to manage received data from the frontend and style robust network frameworks which will handle numerous concurrent user requests, among other features.

The backend can generate XML, which may then be sent to the frontend for display. The frontend can even generate XML data for the backend to store/process using the identical account. For our backend design, we utilized the XML language. Xml could be a mechanism for storing and delivering data that's independent of software and hardware.

4.3 Interaction Design and User Experience (UX)

The planning of user interaction is known as interaction design. After all, usability testing is all about influencing the user's experience with a product, and also the majority of that has the experience that entails some form of interaction between the user and also the merchandise.

Interaction designers are concerned with the moment when a user interacts with a product, and their purpose is to spice up that interaction. All user-facing components of a product or system are involved in user experience design. UX design includes interaction design further.

Approximately ten people use our application. Our app received a rating of 4.5/5 from them. They claim that our app is so well-organized that they can understand it as a whole. They also stated that our app must contain up-to-date information (foreign

medicine name, image, details, and price).If an emergency has occurred, our delivery system must be responsive.

4.4 Implementation Requirements

The completion, execution, or practice of a concept, technique, or any concept, idea, model, specification, standard, or policy for doing something is to be implemented.

For our project, we'll require an Android studio [9]. We can develop our code inside the Android studio to accomplish our work. Furthermore, we regularly must locate a bug in our project. Using this system, we will determine what is wrong with the application.

Our project's main component is Firebase. Accessing real-time data is completed with Firebase [2]. Typically, the work of Firebase is to attach the appliance and determine whether it's functioning accurately. We also require an API [10] for our project so that user data is also secured and guarded within the future. it's easier for users to access it. We would like to assemble some data for our project, in addition to some photographs. Several library packages are also found within the Android Support Library and might be utilized in our app. Each of those libraries is compatible with a specific set of Android platform versions and features.

We must download the library files to our Android SDK installation before we can use any of the subsequent libraries. To complete this step, head to the Support Library Setup and follow the instructions for obtaining the Support Libraries. To integrate a particular support library into our application, we are going to have to take further steps. Important information on the way to use the library in our application is also found at the tip of every library section below.

We must gather information such as photos, details, pricing, and availability of various types of medicines from the company's website. We must search for a variety of medications in order to include them in our application. Details about the medicine are also required in order for the seller to identify what type of medicine is required.

Sellers could choose drugs according on their preferences, and we will add pharmaceutical companies [8] to the list. We need to gather the top 20 pharmaceutical companies [8] in Bangladesh.

Photographs of drugs might also help the seller figure out what kind of medicine it is. When it comes to purchasing, the most crucial consideration is price. The term "price" refers to the cost of the item/medicines.

Moreover, we must determine whether the seller's required drug is available. As our app is based on an online platform, sellers can order from their options at any moment, therefore some medicines may not be available at all times.

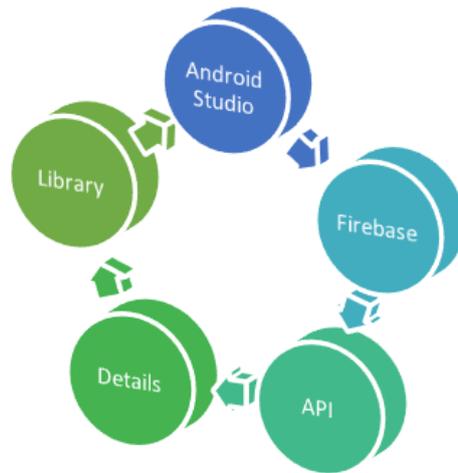


Figure 4.4: Basic requirements of Android app

CHAPTER 5: IMPLEMENTATION AND TESTING

5.1 Implementation of Database

A database [5] may be a list of structured data that has been logically ordered and is stored electronically in an exceedingly ADP system. A management system (DBMS) is the software that manages a database. Data can then be easily accessed, managed, updated, controlled, and arranged. Direction is handled by the database administrator (DBA), which has database security, access control, backup, and disaster recovery. As a database, we use Firebase. We went to the Firebase [13] website to connect our app.

- First, we choose the Android option because our app is built on the Android platform.
- After that, we specified the package name of our app that we want to connect to Firebase.
- We have given our project a formal title.
- We have added the SH1 certificate.
- Then we pressed the register app button.
- We installed the Json file and then added it to our Android Studio.
- To run our code, we start emulator.
- After that, we press the next button. Thereafter, we copied the classpath that the site had provided. So, we go to the project directory and paste build.gradle into the dependency section.
- We must make certain that our app has been migrated from Android to AndroidX.
- We must copy the build.gradle file from the app-level and paste it into the android folder beneath build.gradle (module: app).
- Next we select the option to sync now.
- We take a line from the Firebase [13] website and paste it outside the dependency area.
- After that, our app will connect to the Firebase platform.

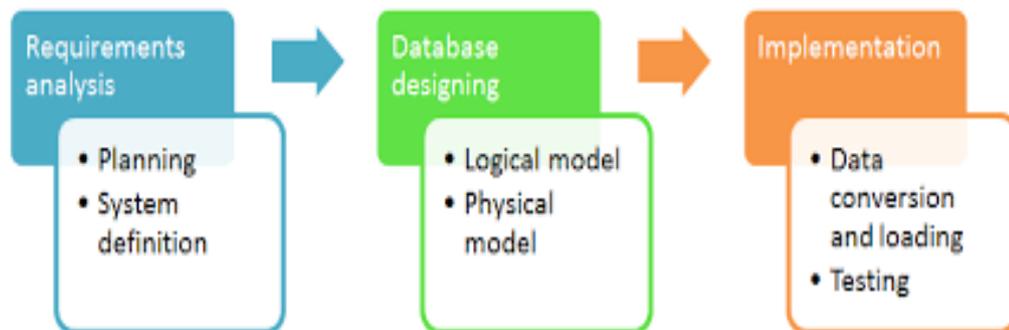


Figure 5.1: Database Management System

5.2 Implementation of Front-end Design

Implementation is necessary to determine whether or not an app is properly functioning. The procedure of putting our application's functionality into action is referred to as "implementation." The method the full front interacts with the back-end style is stated as a front-end implementation. To log in and register authentication in our app, we must sign in or sign up on the Firebase [2] website. We launch the Android Studio [9] software. We pick the empty activity. Following that, we give our project a proper name. We proceeded by pressing the next button. For our app, we choose API [10] version 4.4. For further action, we press the next button [1]. We tap the finish button [1]. We proceed to the Main _Xml file. We write the necessary code for the Login UI or Sign in UI in the Main _Xml file. Our code for designing a login or sign-in page is complete. As a result, in order to design a signup or registration page, we must first create an empty activity. We build the user interface for signing up or registering.

For starters, we provide three variables for the two edit-text and button fields. For the login UI, we find our id for the required edit-text that is phone number and password on the Main Activity. We also find the id for the button to access it from the login UI. We've added the implements method at the top just because we want to show the user a toast message. Then, for the login and signup UI, we utilize a listener. Afterward, we check to see if the listener is functioning. We apply intent to allow users to access the

login UI. For appropriate operation, we additionally import the intent class. So that our activity can begin, we use `startActivity`. We have used the same procedure for sign-up that we use for sign-in. Then we make a small adjustment for the signup activity, such as changing the MainActivity portion to signup activity and renaming the id. Then we make a few changes for the signup activity, such as changing the MainActivity portion to signup activity and changing the id. Afterward, when, if the user clicks the signup button, the user is taken to the registration page. If the user presses the login button, the user is taken to the login UI, on which they can log in to the application. We run our code to see whether the login or signup action is working appropriately.

We give the title for the signup and login activity after we have executed our code so that the user can comprehend it. For the signup activity, we use the same procedure. For the two activities, we check if the title is specified or not. For login authentication, we add our project to the Firebase website. After that, we'll proceed with the project's authentication. But after, we select the sign-in method. From this, we enable the option for users to log in or signup to our app using their phone number as a password. Doing that, we touch the save button [1]. Afterward, we run our code again to see if the login or signup activity is working. Users must have a valid phone number and password in order to log in and register an account on our application.

5.3 Testing Implementation

In general, implementation testing refers to the process of testing design and implementation of app specifications. This process acts as a means of ensuring that the specification is implementable in practice and that applications adhere to the specification. The way people use their smartphones is changing thanks to advances in mobile technology. Despite the fact that consumer applications are in high demand, enterprise applications are also developing, allowing organizations to work more productively. This may appear difficult, especially when there are up to at least different device settings where the app must function properly.

Testing the performance [4] of a mobile application differs from testing the performance [4] of a web application. Poor network conditions, such as packet loss or

latency, have little impact on the laptops or desktops that are used to access web applications.

Given that apps generate a significant portion of Google Play and App Store revenue, there is an urgent need to perform mobile app testing on as many mobile apps as possible. To test the performance [6] of our apps, we employ a strategy.

A well-defined strategy for end-to-end performance testing of mobile apps. On-device execution (content rendering), server performance (content delivery), and network reliability. An up-to-date mobile performance check laboratory that simulates real-world network conditions.

We evaluate the performance [6] of our app in some stages. Example-

- *Testing for connectivity* - Because most mobile apps require internet access, a developer must ensure that the tool is usable even if there isn't any. This entails anticipating a situation for users in flight mode or offline, as well as testing connections with varying bandwidth.
- *Learning the unique properties of each gadget* - Mobile devices, unlike PCs, have a wide range of screen sizes, ranging from 5-inch smartphones to 13-inch tablets. Other technical specifications to consider are the camera, GPS, touchscreen functionality, and the range of supported gestures, among others. A tester should have a greater awareness of such traits, as well as how they affect the app's usability.
- *Simulation of a location* - This step is required for apps that rely on GPS. When a user moves to a different place, a tester must confirm that the product's performance does not suffer significantly. You have the ability to succeed.
- *Testing for fragmentation* - We must ensure that the app works with various versions of the operating system for which it was created. Make a list of the types of devices you want to support and execute tests on those systems only.

- *UX (user experience) testing* - Navigation clarity, intuitiveness of the interface, look and feel of the app layout, error messages, and handling are all important User Experience considerations. In order for the app to be accepted by the app store, UX testing is required.
- *Integration testing* - System integration testing entails comparing the solution's performance to the primary functionalities of Mobile Device Management (MDM) platforms.
- *App performance testing on mobile devices*- The performance quality of high-end and low-end gadgets differs. A developer must guarantee that the software runs consistently across devices with reduced capacities, as well as that the product can handle large server loads.
- *Testing for security* - The data from the device is processed and stored on servers by most mobile apps. To ensure that a user's privacy is not threatened in the event that their phone is lost or stolen, testers must set up a secure authorization system, develop a method for logging all app occurrences, and maintain data confidentiality.

5.4 Test results and Reports

Android Studio is built to make testing straightforward. We can create a JUnit test that runs on the local JVM or an instrumented test that runs on a device with only a few clicks. A test report is a well-organized overview of the testing's goals, activities, and outcomes. It was designed to assist stakeholders (product managers, analysts, testing teams, and developers) in determining product quality and determining whether a product, feature, or defect resolution is on schedule for launch.

We created an environment with emulators and real devices to test such mobile applications. Mobile emulators are programs that must be installed on our laptops or desktop computers in order to simulate a mobile application or platform.

When we set our menu button, the home page does not display the menu button. After some time has passed, we have figured out what went wrong. Whenever we tested our app at this point, we observed no issues.

CHAPTER 6: IMPACT ON SOCIETY, ENVIRONMENT AND SUSTAINABILITY

6.1 Impact on Society:

Day by day we are growing in social media, devices and technologies all classes of people in society and moving their comfort zone in the technology side. So this project is a part of this change. People can easily find the medicines by this app and also sellers will be able to give updates about their old and new products in this app. The outcome is now we can save money time and man power, and so on. And at this time in our society, the big issue is COVID-19. It makes our life more difficult physically. So to keep our life normal, it is the only and one of the best ways to move us on the technological side.

6.2 Impact on Environment:

There is no basic environmental impact actually, but we find a difference between after and before using. Before using the scenario be like all the time many medicine supplier from different companies make a crowd in front of local dispensary public medicals, private medicals, clinics and others medicine spots for giving their updates. (New arrival, price, etc.) And taking the updates from buyers (What they need, what is more, demandable in marketplace). But after using this app, this scenario will be the change A to Z. There is no need to go to the sellers in front of those places by this app give and take all updates to the buyer very easily and in a short time. And buyers also can get all the updates in the same way, for this reason, we missed a scene and that is the crowd of medicine suppliers in front of hospitals and dispensaries. Which is actually able to keep the outside environment cool.

6.3 Ethical Aspect

Here the ethical thing is, think normally what happens? The happening thing is, medicine delivery man or supplier come to supply medicine but all the time they have no clear idea what and how many actually their customers need. For this reason, they

carry lots of medicine with them. From there, their customers pick their needs. This carrying is actually so hard for the suppliers. But after using this app they are concerned and well known about their customer's want, so no need to carry extra products with them. This is the actual ethical benefit.

6.4 Sustainability Plan

It is obviously a sustainable plan. It's one kind of our dream project. Before making this app, we thought about its sustainability. In future, we want to grow this project broadly, In fact, our wish is to grow it internationally, though it is so much hard. We want to develop it more, we want to add more features, more data and so many options so that the users get more Comfort zone. We want to see this app as a popular app like Daraz, Alibaba etc. We want that people use it daily and properly. This is about the sustainability plan for this project.

CHAPTER 7: CONCLUSION AND FUTURE SCOPE

7.1 Discussion and Conclusion

To run with digitalization, it is important to be digital. As a part of this sector, we need to convert most of our needle things into our daily life. Medicine is that kind of thing of our life, that is a mandatory part of life. We get these medicines from different dispensaries. The medicine suppliers supply this medicine physically, which is really so hard for them. They need many man powers, money, time etc. Still, there is no digitalization in this sector. So if we can make this sector digital, it will be smoother for both buyers and sellers. Now come to the point, if it is possible to make this sector digital, what will happen?

If we can make this site digital, the physical Procedure will be smoother. The work of suppliers will be smoother. They easily can give their product updates (stock update, new arrival update, price update) etc. They can save their manpower, money, time. With this app, they easily can find out their customers' requirements. And in the end, we can say by this app we are growing one more step with digitalization.

7.2 Scope for Further Development

Normally there are so many scopes for further developments. In future, we can develop it nationally and internationally also if we want. For national developments, we can add here all types of companies, all types of medicine. So that customers don't feel any lacking. For the security of users, we can add more security features. So that no one can misuse this app by any chance. If we think to develop it internationally, we have to develop the whole feature of this app. It can be an established project in future. So always there are many things to develop it in future.

APPENDICES

Appendix A1: Project Reflection

Medicine companies are growing at a rapid rate in Bangladesh. By SR/MR, the company gives the seller their drugs (SR stands for sales representative & MR stands for medicine representative). Pharmaceutical companies are supplying drugs in response to consumer demand. There are situations when a company does not have a SR/MR.

We developed an Android trade base marketing app to help a shopkeeper and a pharmaceutical company establish a partnership. Sellers don't have to worry about drug purchases from the company when they use our app.

Appendix B1: Related Issues

While collecting images, data, and prices of drugs from each and every company, we had to invest additional time. We had to look up the drugs on the internet to see if they were available. We had to research various Android features and functionality.

We need to learn about Android API versions. Also had to learn about Android API versions that we wanted to use in our project. We got to know about Firebase in order to link our app to it.

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