A project report on

"ADAM (Ailment Detection and Medicine Suggestion App)"

Submitted in partial fulfillment of the requirement for the award of

DIPLOMA IN

COMPUTER ENGINEERING

by

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CERTIFICATE

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"ADAM (Ailment Detection and Medicine Suggestion App)"

has been successfully completed and submitted by

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for the partial fulfillment of the requirement for the award of Diploma Course in Computer Engineering as laid down by **Maharashtra State Board of Technical Education** for the academic year **2018 – 2019.**

During the project they have maintained regular attendance and have worked sincerely.

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(Prof. P. Bhosale)	**(Prof. Umesh Patil)**	**(Prof .N.P. Vetale)**
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INTERNAL EXAMINER	**EXTERNAL EXAMINER**

ACKNOWLEDGEMENT

After the completion of this project, words are not enough to express our gratitude towards all those who helped us achieve our goal.

It's a great pleasure and moment of immense satisfaction for us to express our profound gratitude to our guide **Prof. Prasad Bhosale,** whose constant encouragement enabled us to work enthusiastically. His perpetual motivation, patience and excellent expertise in the discussion during progress of the project work have benefited us to an extent, which is beyond expression.

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Last but not the least; I would also like to thank all those who directly or indirectly helped us in completion of our Application.

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ABSTRACT

Nearly 27% of deaths occur in India due to lack of medical attention or by not detecting the symptoms on earlier basis. Such deaths can be avoided with help of utilizing the unique functions brought to you by Adam. Cardiovascular diseases (CVDs) have now become the leading cause of mortality in India.

Diseases like cardiovascular and many other can be prevented with help of *Adam* application. The app provides information about the diseases as well as their identification and is also equipped with a customized treatment plan along with recommended dosage information respectively. It also aids the user with crucial information like the symptoms as well as the remedies of diseases. This diseases can be stopped at earlier stages if appropriate actions are taken and these actions are provided by the app. ADAM also provides various functionalities like barcode scanning which can help the user in identification of their required medicines.

One instead of going to doctors for minor diseases can refer to ADAM for suggestions and in order to acknowledge, the seriousness of the symptoms or suppress the symptoms for time being by following directed actions by the app.

CHAPTER – 1

INTRODUCTION

INTRODUCTION

Understand what could be wrong if you or someone you care about is not feeling well.

Adam makes the job of tracking the symptoms of users suffering from Disorders and Diseases easy. It knows hundreds of symptoms and conditions, from a common cold to rare diseases. The proposed system consists of accepting the symptoms, Speculating the disease based on the symptoms and providing relatable diagnosis and medication. *Adam* has the potential to help hundreds of people every day to live a healthier life.

The app can especially be beneficial for bachelors or single personals as it guides or helps them by providing various suggestions. It is also equipped with emergency feature which provides the number of ambulance and much more.

The serious diseases like CVD (responsible for 24.8% deaths), respiratory diseases (responsible for 10.2% deaths), Tuberculosis (responsible for 10.1% deaths), tumors (responsible for 9%of deaths in the country) etc. can be prevented at early stages by taking certain actions

methods like quitting smoking, performing time to time vaccination, having a healthy diet etc.

Such crucial information can be displayed by the app. The app provides information in a systematic and easy to understand manner which aids the user.

How can *ADAM* help you?

1. Tell *Adam* what's troubling you

2. Understand what could be wrong

3. Get instant information relevant to you

Our app delivers quality care with improved patient interaction and efficient workflows.

It provides optimal care at any given point of time. The purpose of our app is to bring advanced mobile patient care tools to the user

Our app has three main characteristics:

1. It is easy to use. You can get your desired results in a few steps or clicks.

2. It offers services that are relevant to the user’s circumstances.

3.This app provides content instantly to its users. As it is user friendly

CHAPTER – 2

LITERATURE SURVEY

LITERATURE SURVEY

In Worldwide use of computer technology in medicine began in the early 1950s with the rise of the computers. In 1949, Gustav Wagner established the first professional organization for informatics in Germany. The prehistory, history, and future of medical information and health information technology are discussed in reference. Specialized university departments and Informatics training programs began during the 1960s in France, Germany, Belgium and The Netherlands.

Medical informatics research units began to appear during the 1970s in Poland and in the U.S. Since then the development of high-quality health informatics research, education and infrastructure has been a goal of the U.S. and the European Union.

Early names for health informatics included medical computing, biomedical computing, medical computer science, computer medicine, medical electronic data processing, medical automatic data processing, medical information processing, medical information science, medical software engineering, and medical computer technology.

The health informatics community is still growing, it is by no means a mature profession, but work in the UK by the voluntary registration body, the UK Council of Health Informatics Professions has suggested eight key constituencies within the domain—information management, knowledge management, portfolio/program/project management, ICT, Education and research, clinical informatics, health records(service and business-related), health informatics service management. These constituencies accommodate professionals in and for the NHS, in academia and commercial service and solution providers.

CHAPTER – 3

PROBLEM DEFINITION

PROBLEM DEFINITION

- People neglect the early symptoms of diseases.
- Fake/inaccurate medical information on hoax internet sites.
- Inability of people living in rural areas to acquire proper medical facilities.
- Lack of user-friendly/interactive applications in the market.
- Lack of knowledge about living a healthy lifestyle.
- people often forget the recommended medicine dosage.

CHAPTER – 4

EXISITING SYSTEM

EXISITING SYSTEM

Nearly 27% of deaths occur in India due to lack of medical attention or by not detecting the symptoms earlier. Cardiovascular diseases (CVDs) have now become the leading cause of mortality in India. A quarter of all mortality is attributable to CVD. Ischemic heart disease and stroke are the predominant causes and are responsible for >80% of CVD deaths. Diseases like cardiovascular and many other can be prevented with help of *Adam* app.

People often neglect the early symptoms as they are not aware of it and which results into worsening of the diseases. They are also not aware of the medication and are often hesitant to visit a doctor due to their high admission fees.

CHAPTER – 5

PROPOSED SYSTEM

PROPOSED SYSTEM

- People would be able to identify diseases.
- Users can get guaranteed/accurate information regarding diseases.
- Medical information displayed in a short and easy to read format.
- User-friendly/interactive as smart selection is introduced.
- Spread awareness among people in rural areas to prevent/treat diseases in early stages.

The app also provides the user with valuable suggestions or remedies by specialized doctors along with their details. The app can be especially be beneficial for bachelors or single personals as it guides or helps them by providing various suggestions. It is also equipped with emergency feature which provides the number of ambulance and much more.

The application can be used by users of almost all the age groups, as it is user friendly and easy to use.

CHAPTER – 6

REQUIREMENTS

REQUIREMENTS

The system requirements encompass all of the software, hardware and cloud infrastructure required to make the project work.

1. Software Requirements:

A Smart Phone running Android Lollipop (5.0) or any later version of Android Operating System.

2. Hardware Requirements: The hardware requirements are as follows:

a. Camera:

Camera with minimum resolution of 2 Mega-Pixel.

b. RAM:

An Android Device with Minimum RAM of 1 Giga-bytes.

c. Storage:

An Android Device with Minimum ROM of 2 Giga-bytes.

a. Display:

Display with minimum resolution of 1080x800.

CHAPTER – 7

IMPLEMENTATION

IMPLEMENTATION

Smartphones are recent technologies that combine the capabilities of telephone communications and informatics in small portable devices that allow communications and information processing even at the patient's bedside. Several studies have shown that smartphones are frequently used among physicians, medical students and interns, with overall use rates reaching 80%. Current devices have a wide variety of functions, which can assist in medical decision making, information searches and educational applications, among other uses.

Despite this popularity, there is limited evidence regarding the effectiveness of smartphone use in broadcasting of Medical and Health related information among the users because of the low standards of user experience or User Interface (UI).

Our Health Application(ie. Adam) aims to determine whether the implementation of a smartphone application designed to assist in delivering Health related data such as brief Disease and Medicine Information, Health News, Tips, etc. to a large amount of audience made available by the medium of Smartphone.

Our system consists of accepting the symptoms, creation of database of the user, Speculating the disease based on the symptoms and provide the relatable diagnosis. Provides users, suggestion from the doctors specialize on the particular disease, even give contacts to approach them. Adam have the potential to help hundreds of people every day to live a healthier life.

The app also provides the user with valuable suggestions or remedies by specialized doctors along with their details. The app can be especially be beneficial for bachelors or single personals as it guides or helps them by providing various suggestions. It is also equipped with emergency feature which provides the number of ambulance and much more.

The mobile health industry, along with remote monitoring and telehealth systems, has a wide impact on reducing hospitalizations and emergency room visits throughout the healthcare spectrum by improving communication and care coordination among specialists, doctors, nurses, and others. Research has shown that hospital readmission rates have been cut by 92 percent while emergency room visits dropped by 87 percent with the use of mobile health apps and greater communication.

The use of mobile communication tools has also allowed for greater patient engagement, which means more individuals are focused on improving their health and wellness such as sticking to a healthy, physician-recommended diet, continuing exercise routines, and adhering to their medication schedule along with follow-up appointments.

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CHAPTER – 8

MODULE

MODULE

- **Smart selection:** allows the user to select a specified area where the symptoms have occurred to pinpoint the potential diseases.
- **Barcode scanner:** allows the user to scan barcodes and obtain information about that particular medicine accordingly.
- **Emergency call function:** helps in alerting various medical or emergency related facilities.
- **Health tips:** provides numerous health tips classified in an age group format ranging from kids to elderly users.
- **News:** specialized section used to display various medical field related news or breakthroughs which occur in medical fields.
- **Display panel:** the displayed data is arranged and grouped in accordance of users better understanding.

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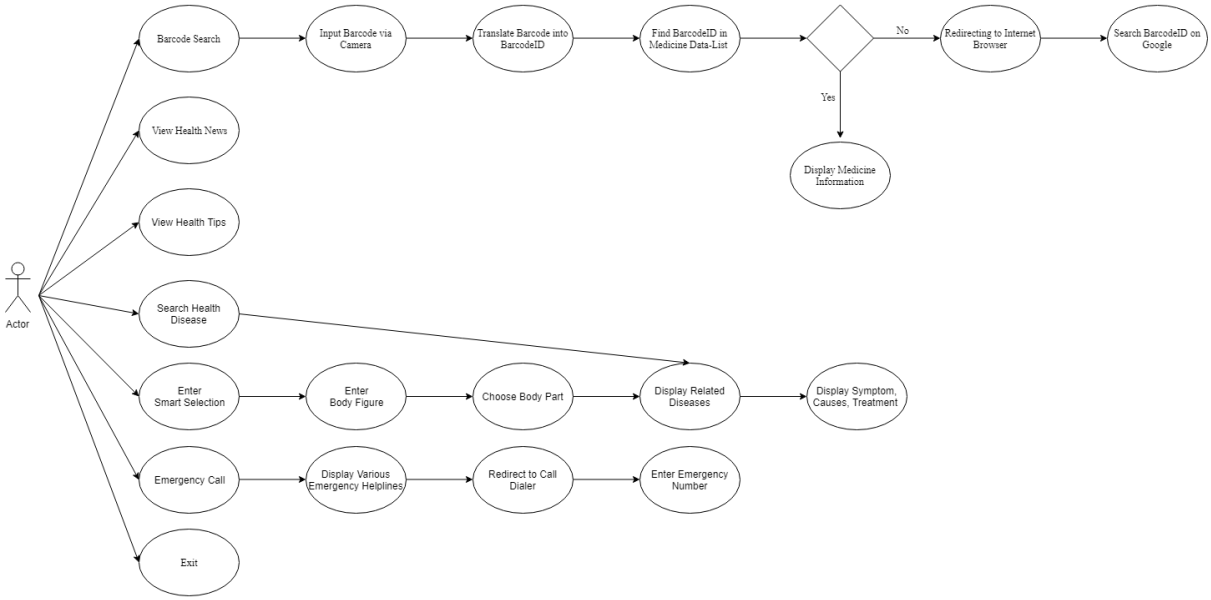
CHAPTER – 9

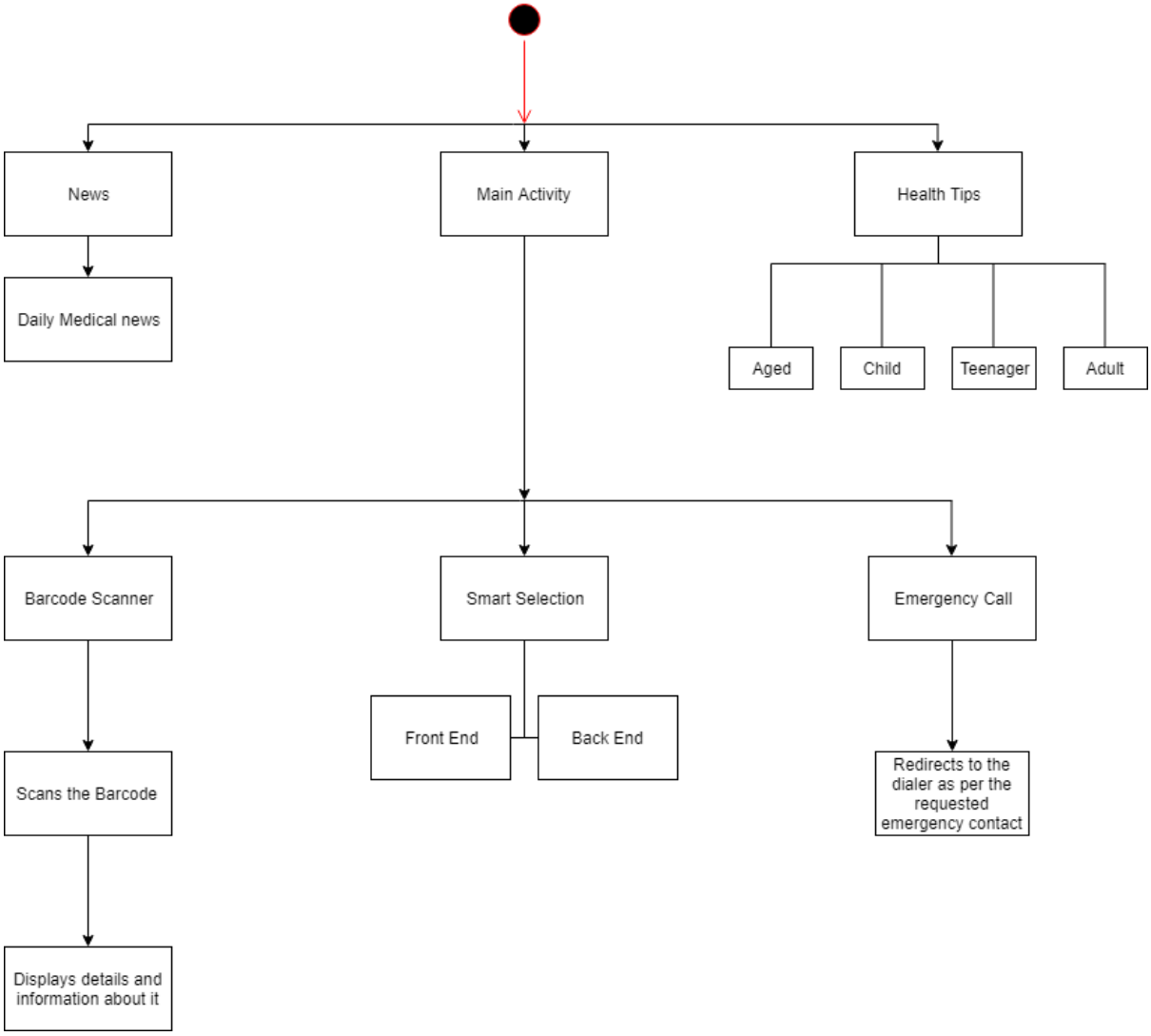
UML DIAGRAMS

UML DIAGRAMS



Use Case Diagram

UML DIAGRAMS



Activity Diagram

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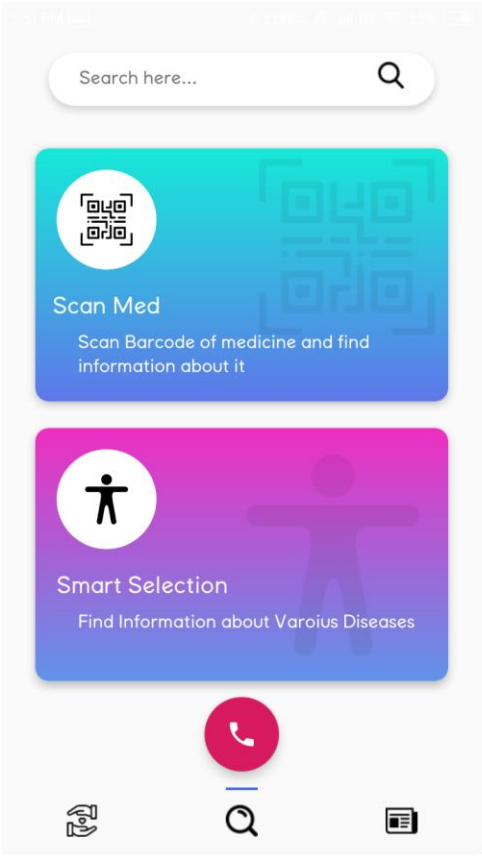
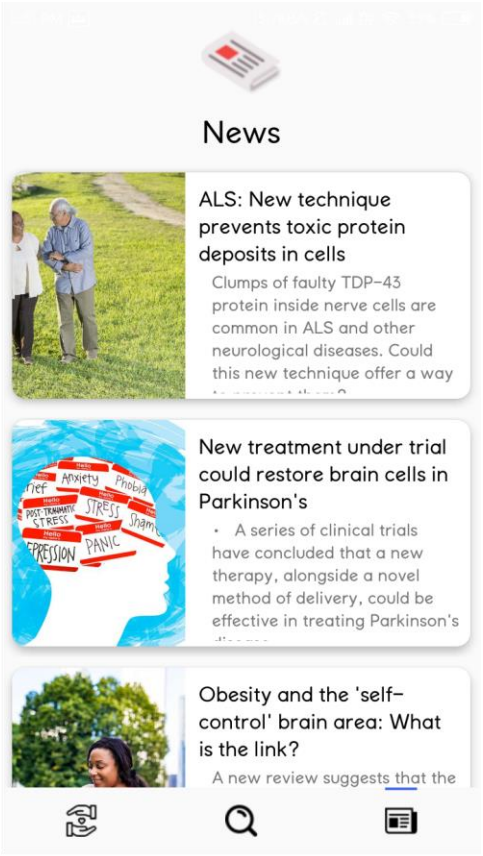
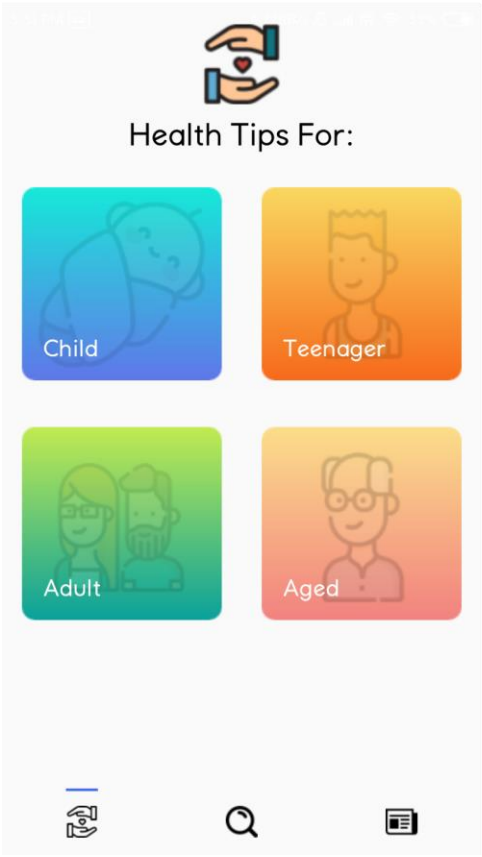
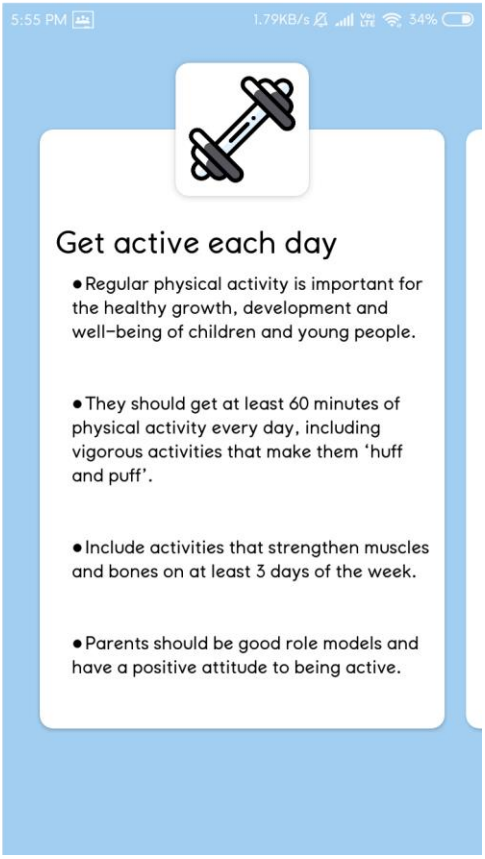
SCREENSHOTS

SCREENSHOTS









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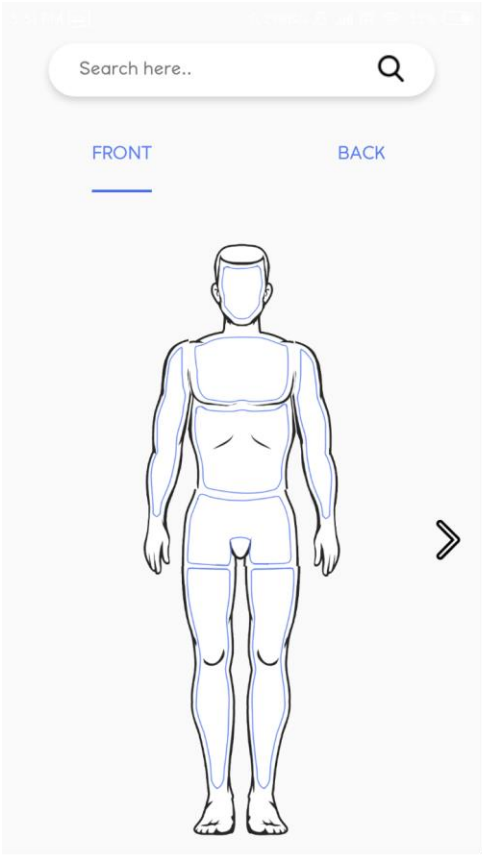

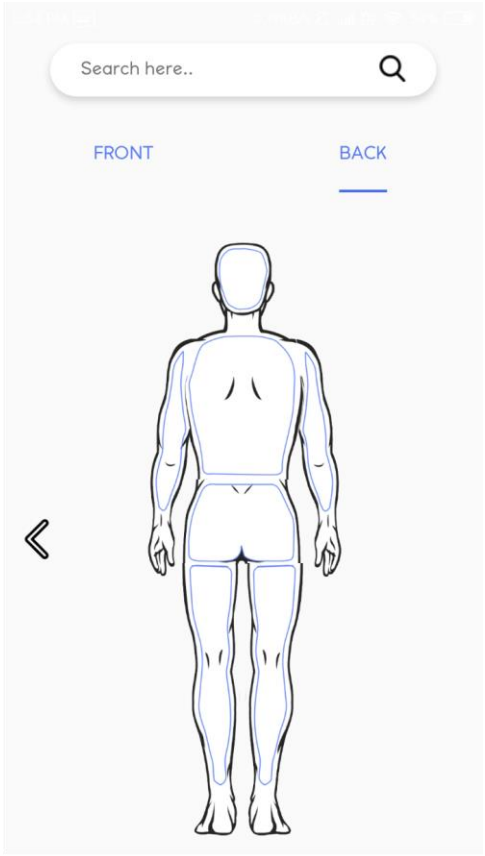

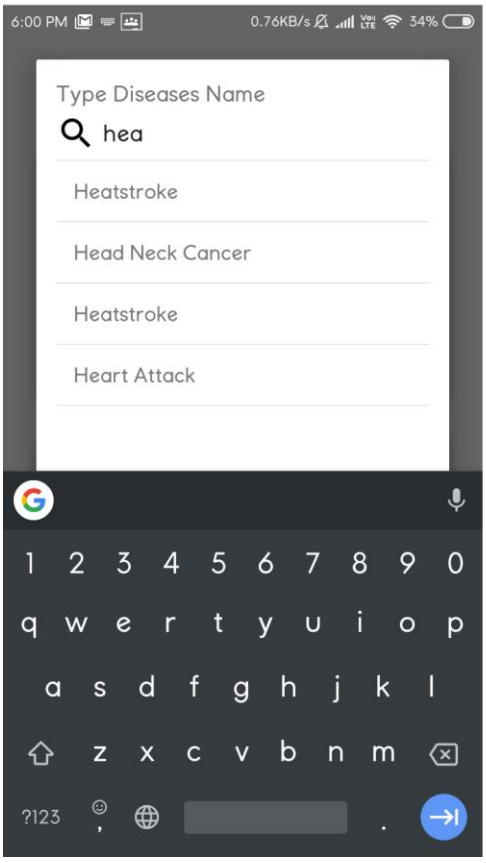

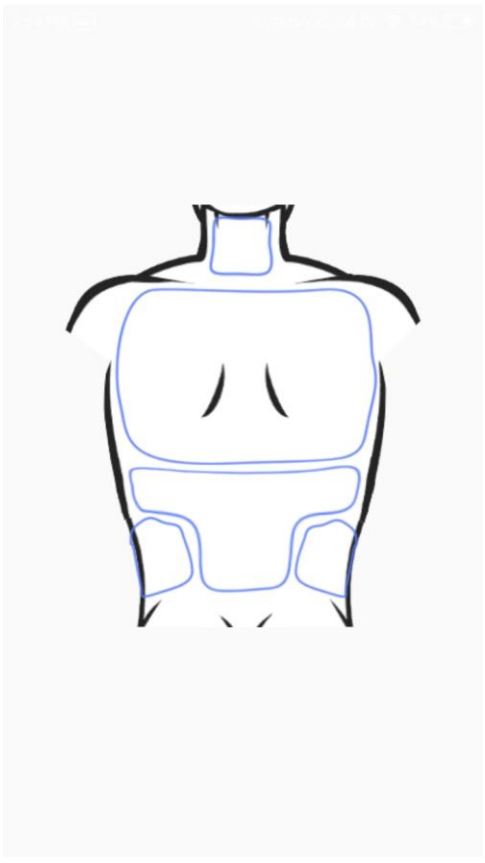

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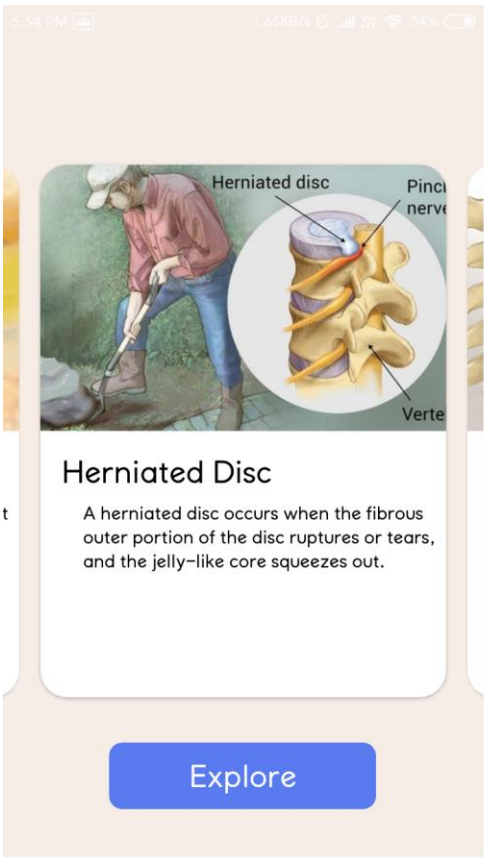

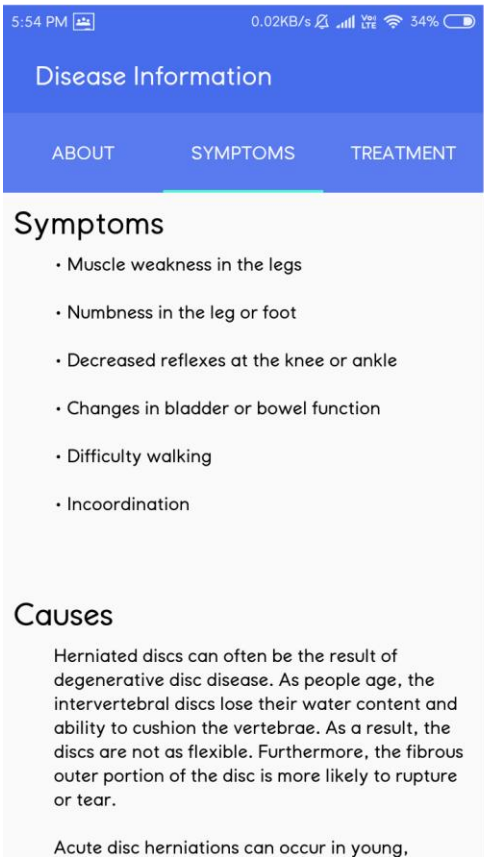

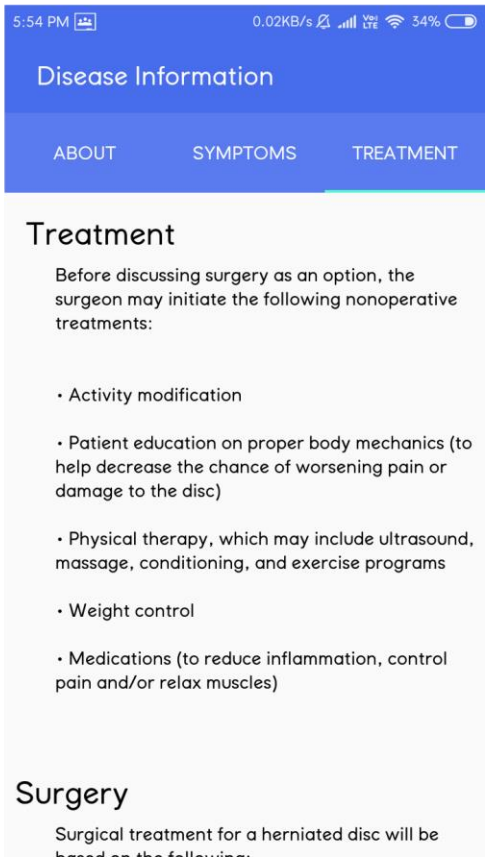

CHAPTER – 11

MERITS AND DEMERITS

MERITS AND DEMERITS

1. Merits:

- User-friendly / interactive
- Easy access to medical information of medicines using barcode scanner.
- Information arranged in easy to read format
- Emergency call function can be utilized during medical emergencies
- Home remedies are also provided by the application

2. Demerits:

- Lack of accuracy in terms of detection of diseases

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CHAPTER – 12

CONCLUSION

CONCLUSION

Adam will play a relevant role in the healthcare system and its application encompasses many aspects of the healthcare system. The main drivers for the increasing role of *Adam* in healthcare system include the need to improve efficiency in healthcare advises, patient safety, increase access to health care services, and more importantly, the need to reduce the costs of medical expenditures. *Adam* will be very useful in various ways in healthcare system ranging from clinical care application to administrative function, to clinical research function, to financial application, and reporting in the healthcare system.

CHAPTER – 13

FUTURE SCOPE

FUTURE SCOPE

The mobile health industry, along with remote monitoring and telehealth systems, has a wide impact on reducing hospitalizations and emergency room visits throughout the healthcare spectrum by improving communication and care coordination among specialists, doctors, nurses, and others. Research has shown that hospital readmission rates have been cut by 92 percent while emergency room visits dropped by 87 percent with the use of mobile health apps and greater communication.

ADAM can aid large amount of users and allow them to maintain good health.

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CHAPTER – 14

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