NEW HORIZON
COLLEGE OF ENGINEERING
New Horizon Knowledge Park, Ring Road, Marathalli
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

BLOOD BANK MANAGEMENT SYSTEM

MINI PROJECT USING JAVA AND DBMS

(19MCA39)

REPORT

Submitted by

RAM BISWARUP ROY

1NZ19MCA18

In partial fulfillment for the award of the degree of

MASTER OF COMPUTER APPLICATIONS

2020-2021

NEW HORIZON COLLEGE OF ENGINEERING

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DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

CERTIFICATE

This is to certify that **RAM BISWARUP ROY,** bearing USN **1NZ19MCA18** has successfully completed his/her third semester mini project work entitled **BLOOD BANK MANAGEMENT SYSTEM** as a partial fulfillment of the requirements for the award of **MASTER OF COMPUTER APPLICATIONS** degree, during the Academic Year **2020-21** under my supervision. This report has not been submitted to any other Organization/University for any award of degree.

Signature of the Guide **Head of the Department**

External Viva

Internal Examiner External Examiner

Date:

DECLARATION

I, **RAM BISWARUP ROY**, student of III Semester MCA, bearing USN **1NZ19MCA18** hereby declare that the project work entitled **"BLOOD BANK MANAGEMENT SYSTEM"** has been carried out by me under the supervision of Internal Guide **Dr. A.P.Nirmala** and submitted in partial fulfillment of the requirements for the award of the Degree of Master of Computer Applications by Department of Master of Computer Applications, New Horizon College of Engineering, an Autonomous Institution, Affiliated to Visvesvaraya Technological University during the academic year **2020-21**. This report has not been submitted to any other Organization/University for any award of degree.

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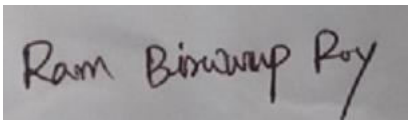
Signature : 

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Blood Bank Management System

by Ram Biswarup Roy

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Blood Bank Management System

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SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Lewis, . "Transforming Requirements to Testable Test Cases", Software Testing and Continuous Quality Improvement Third Edition, 2008. Publication	2%
2	Mohammed Y. Esmail, Yousra Sayed Hammad Osman. "Computerized Central Blood Bank Management System (CCBBMS)", 2018 International Conference on Computer, Control, Electrical, and Electronics Engineering (ICCCEEE), 2018 Publication	1%
3	Sozer, . "Delivering Effective Training", DNA Analysis for Missing Person Identification in Mass Fatalities, 2014. Publication	1%
4	Defnizal Defnizal, Risa Nadia Ernes. "The Implementation of Artificial Intelligence in Charity Box at Mosque and Musholla as RFID Based Security System", SinkrOn, 2020 Publication	<1%

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I thank all the staff members of the Department of Master of Computer Applications, for extending their constant support to complete the project. I express my heartfelt thanks to my parents and friends who were a constant source of support and inspiration throughout the project.

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ABSTRACT

This project is aimed to develop online Blood Donation information. The entire project has been developed keeping in view of the distributed client server computing technology in mind.

The Blood Donation Agent is to create an e-information about the donor an Organization that are related to donating the blood. Through this application any person who is interested in donating the blood can register himself. And if any general consumer wants to make request blood online he can also take the help of this site.

For example: in earlier days if a person needs O+ blood group Blood then would send message through phones but it is a late process and it reach to some extent only. This is the major problem. By using this website the people can search for the required Blood Group very easily through internet, if the required donor is not available we will contact with that person directly. All these tasks will be done with in short span of time.

Admin is the main authority who can do addition, deletion, and modification if required.

The project has been planned to be having the view of distributed architecture with centralized storage of the database. The application for the storage of the data has been planned. Using the constructs of MS_SQL server.

The database connectivity is planned using the “SQL connection” methodology. The standards of security and data protective mechanism have been given a big choice for proper uses. Client side technologies used are HTML, Cascading Style Sheets, Java.

CHAPTER 1

INTRODUCTION

1.1 GENERAL INTRODUCTION

The project blood bank management system is known to be a pilot project that is designed for the blood bank to gather blood from various sources and distribute it to the needy people who have high requirements for it. The software is designed to handle the daily transactions of the blood bank and search the details when required. It also helps to register the details of donors, blood collection details as well as blood issued reports. The software application is designed in such a manner that it can suit the needs of all the blood bank requirements in the course of future.

1.2 PROJECT DESCRIPTION

The BLOOD BANK MANAGEMENT SYSTEM is great project. this project is designed for successful completion of a project on blood bank management system. The basic building aim is to provide blood donation service to the city recently. Blood Bank Management System (BBMS) is a Web-based application that is designed to store, process, retrieve and analyse information concerned with the administrative and inventory management within a blood bank. This project aims at maintaining all the information pertaining to blood donors, different blood groups available in each blood bank and help them manage in a better way. Project Aim is to provide transparency in this field, make the process of obtaining blood from a blood bank hassle-free and corruption-free and make the system of blood bank management effective.

1.3 EXISTING SYSTEM

- The operation of the blood bank still now is maintained in the manual system.
- The operation is tedious, time consuming and space consuming.
- It creates room for errors as the data is entered manually by the persons.
- It includes the risk of the documents being lost over years and maintenance of the record is difficult.
- The data recorded during testing or while acquiring the details of different aspects of blood bank management system is not so accurate and precise.
- Maintaining the stock of blood and the daily transactions without computerization also poses a challenge.

1.4 PROPOSED SYSTEM WITH METHODLOGY

- Easy to use
- Enable smooth and secure operation
- Increase processing speed
- User friendly interface
- Chances of errors are reduced.
- Trust and safety on user data.

1.5 Feasibility Study

1.5.1 Technical Feasibility

Technical feasibility aims on application hardware, software and to what level can the system be supported. When we examine the technical feasibility we give more importance to the configuration of the system rather than the hardware. When we perform this we get clear picture of system requirements.

1.5.2 Economic Feasibility

Economic feasibility is most frequently used method to evaluate the effectiveness of the system. We usually assume that cost of the project is not that greater than the benefit of the project. So, if we can develop the application easily then it's used for evaluation of the proposed. It's not done to analyze the new system.

1.5.3 Operational feasibility

It basically tells how well the application is acceptable within an organization or business point of view. We should develop a menu which is easily understood by users and can easily access. Providing help and guideline is also best.

CHAPTER 2

REVIEW OF LITERATURE

2.1 Review Summary

In earlier days if a person needs O+ group blood, then we would send messages through phones, but it is a late process and its reach to some extent only. This is the major problem. Using this website the people can search for the required blood group very easily through the internet, if the required donor is available we will contact with that person directly. All these tasks will be done within a short span of time. Admin is the main authority who can do addition, deletion, and modification if required. The project has been planned to be having the view of distributed architecture with centralized storage of the database. The application for the storage of the data has been planned. Using the constructs of MS-SQL Server. The database connectivity is planned using the "SQL Connection" methodology. The standards of security and data protective mechanism have been given a big choice for proper usage.

CHAPTER 3

SYSTEM CONFIGURATION

System configuration is the term that defines the computer hardware, the processes as well as very devices that compromises entire system and its boundaries. The term also referred to the specification of the given computer system, from its hardware component to its software and various process that run within that system.

It refers to what type and module of devices are installed and what specific software is being run on the various part of the system. By extension, System configuration also refers to specific operating system that have been set default automatically or manually by a given program or user.

A computer system particularly the operating system, dictates a set of default settings and configuration when the system first comes online. This system dictates the normal function and features that make the system run an effective and stable manner. To this end the operating system have their own configuration utilities to allow administrators are used to change the configuration of the system.

3.1 Hardware requirements:

Minimum requirements of 512 MB RAM.

3.2 Software requirements:

Eclipse IDE

MYSQL Database

CHAPTER 4

MODULE DESCRIPTION

4.1 Index

In index module if the user is an admin then he to directly go to admin login page from this module. And if any user wants to request blood the he/she can request blood from this module. To go to the admin panel user must need to know the admin username and password. After entering the correct username and password system will authenticate and the redirect the user into the admin home page. If the user request for blood then one message will appear on the screen that is “You will notified within 24 hours..”.

4.2 Admin

In admin panel the user who log in as an admin can do all the operation which mentioned below:

a) The admin can add new donor.

b) He/she can edit or delete any donor details.

c) He/she can manage the blood availability stocks.

d)Also he/she can check the list of users who and all requests for blood.

For entering admin panel user must need to enter the correct username and password. If it is correct then only user permitted to enter admin panel.

CHAPTER-5

SYSTEM DESIGN

5.1 DATA FLOW DIAGRAM(DFD):

Context Level - DFD:

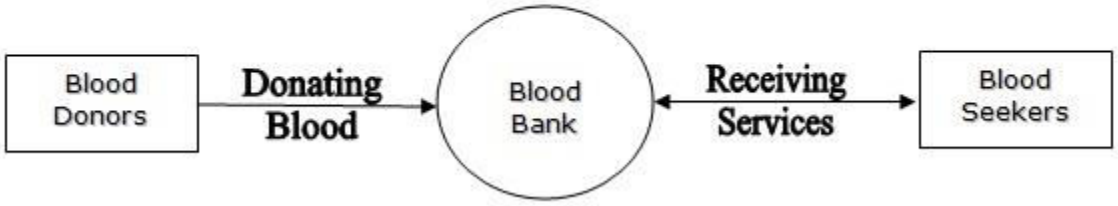


Fig 5.1: Context Diagram (DFD)

This is the context diagram of the system. The Context Diagram shows the system under consideration as a single high-level process and then shows the relationship that the system has with other external entities (systems, organizational groups, external data stores, etc.). Another name for a Context Diagram is a Context-Level Data-Flow Diagram or a Level-0 Data Flow Diagram. Since a Context Diagram is a specialized version of Data-Flow Diagram, understanding a bit about Data-Flow Diagrams can be helpful.

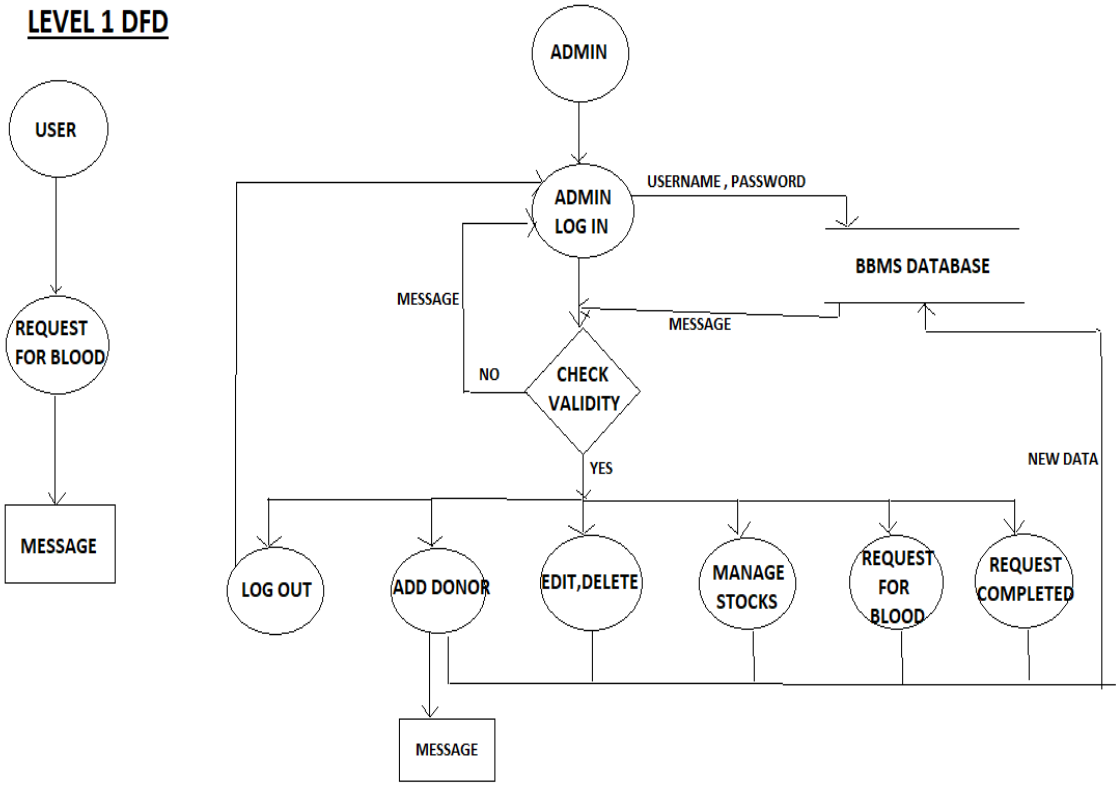


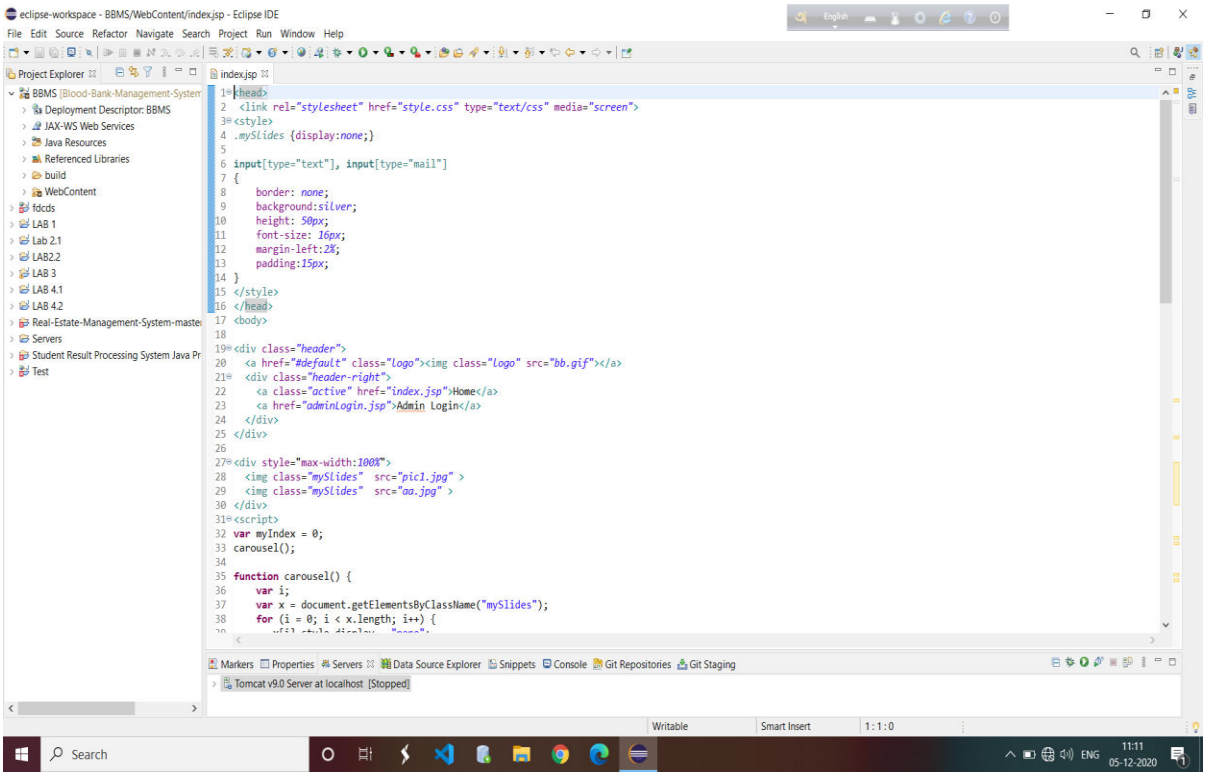
Fig 5.2: Level 1 DFD

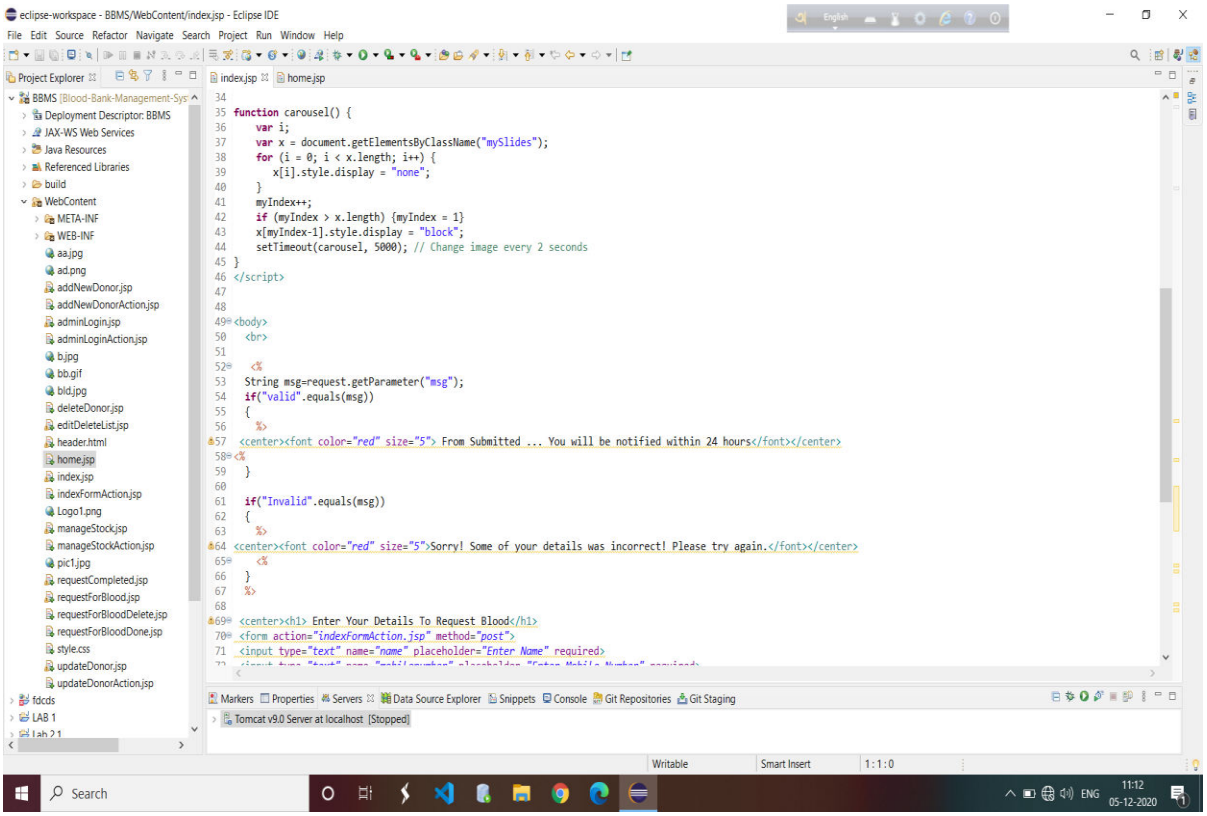
This is level 1 DFD. Here the user can more understand about the system that he not understood in context diagram.

CHAPTER 6

SYSTEM IMPLEMENTATION

6.1 IMPLEMENTATION (SOURCE CODE):





6.2 SCREENSHOTS

6.2.1 INDEX PAGE:

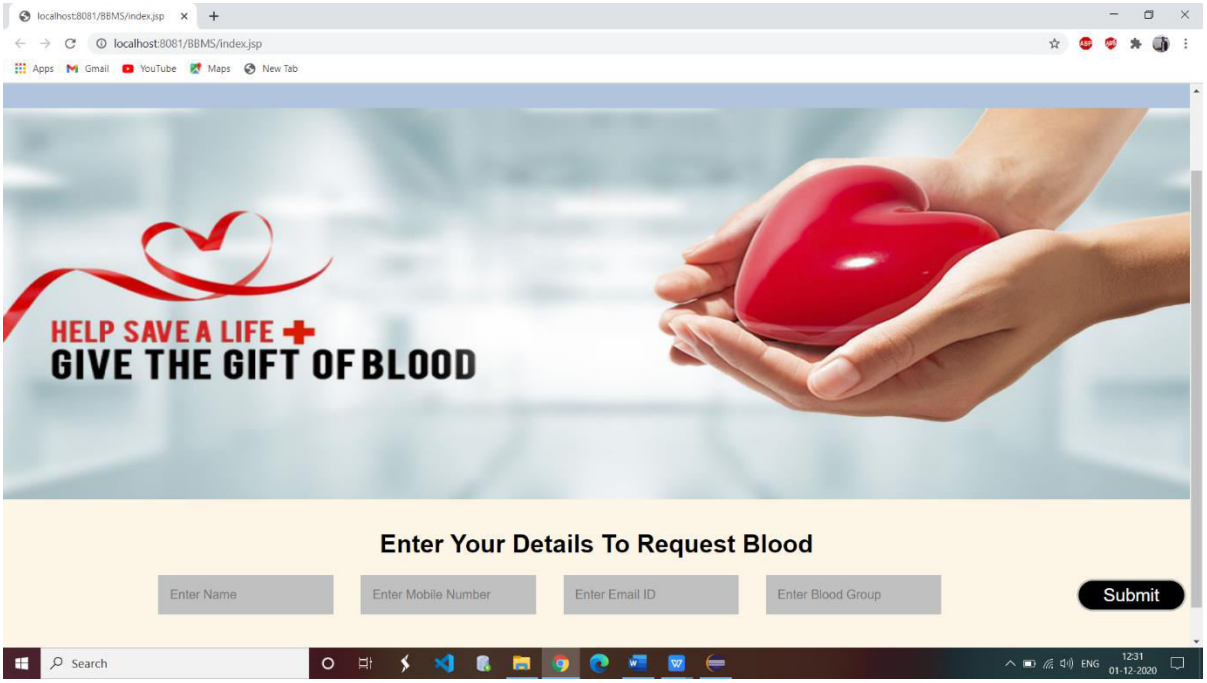


Fig 6.1: Index page

This is the index page where user can request for blood. If he/she is admin then he needs to go to the admin login page. If the user is an admin then he to directly go to admin login page from this module. And if any user wants to request blood the he/she can request blood from this module.

6.2.2 ADMIN LOGIN PAGE:

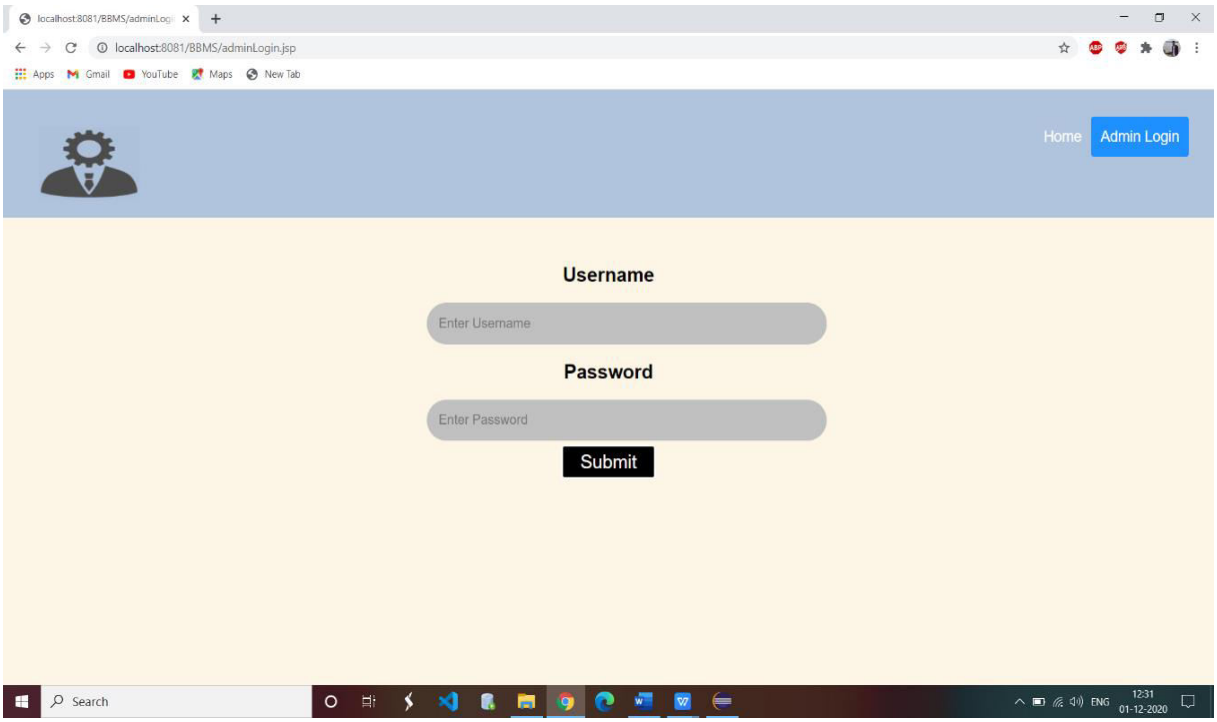


Fig 6.2: Admin login page

In this admin needs to enter username and password then, after validating he/she will be redirect admin home page.

6.2.3 ADMIN HOME PAGE:

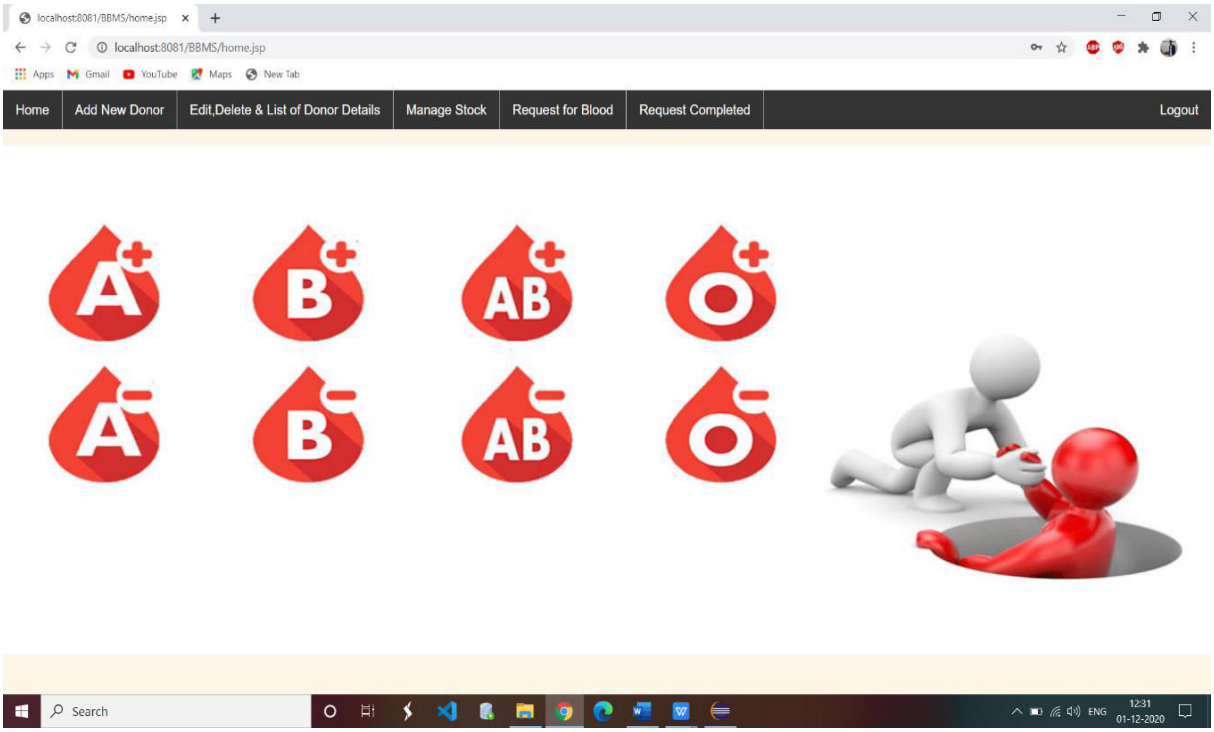


Fig 6.3: Admin home page

This is the admin login page from where anyone can navigate where admin wants to go.

Admin can go to the following pages:

a) Add new donor page

b) Edit, Delete page

c) Manage Stock page

d) Request for blood page

e) Request completed page

6.2.4 ADD NEW DONOR PAGE:

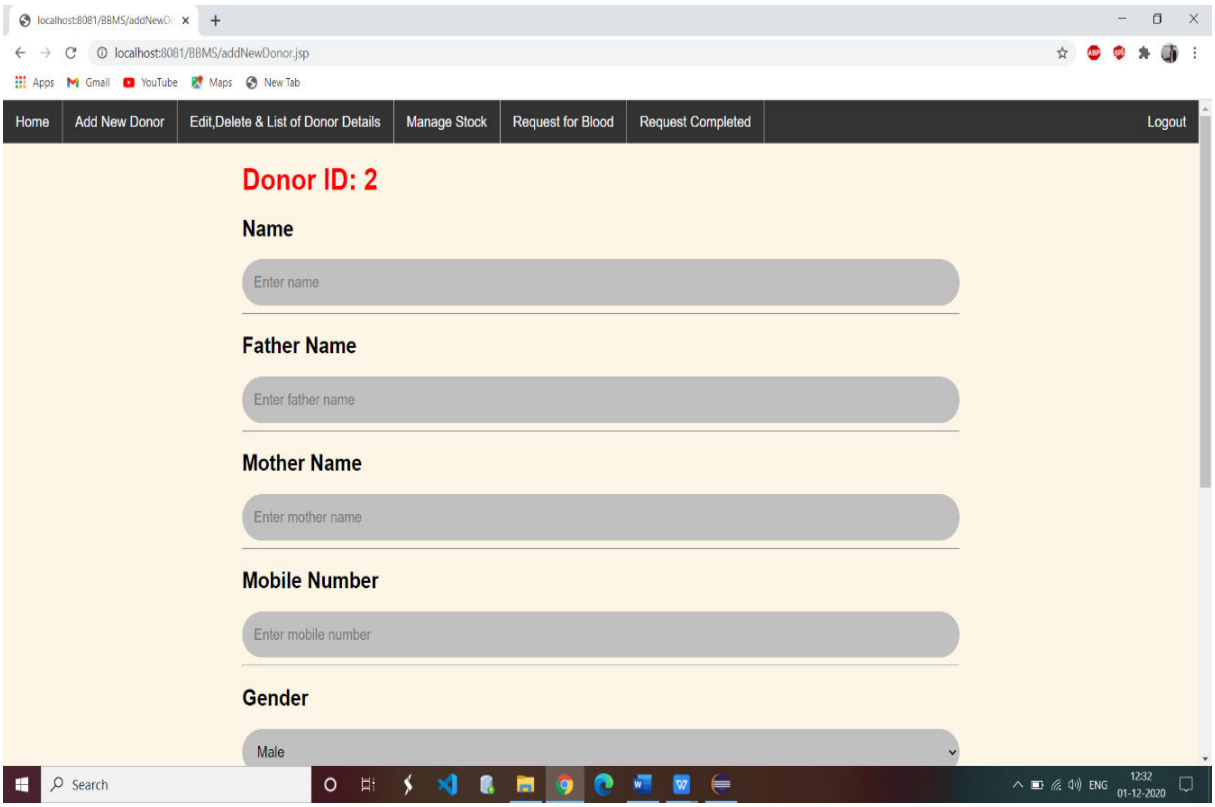


Fig 6.4: Add new donor page

Here admin can register a new donor by entering the details. To register as a donor user needs to give the correct information otherwise it will show error. The unique donor id is mentioned on the top which user needs to note for future purpose.

6.2.5 EDIT PAGE:

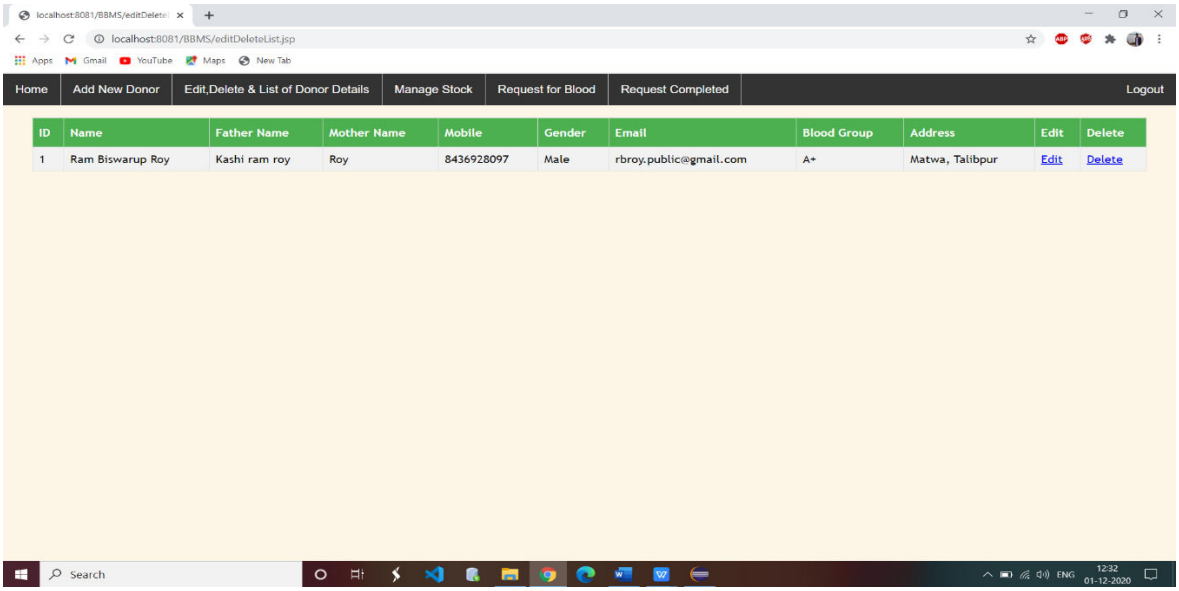


Fig 6.5: Edit page

In this page admin can check all the donor details. Also in this page admin can edit or delete any donor details.

6.2.6 MANAGE STOCK PAGE:

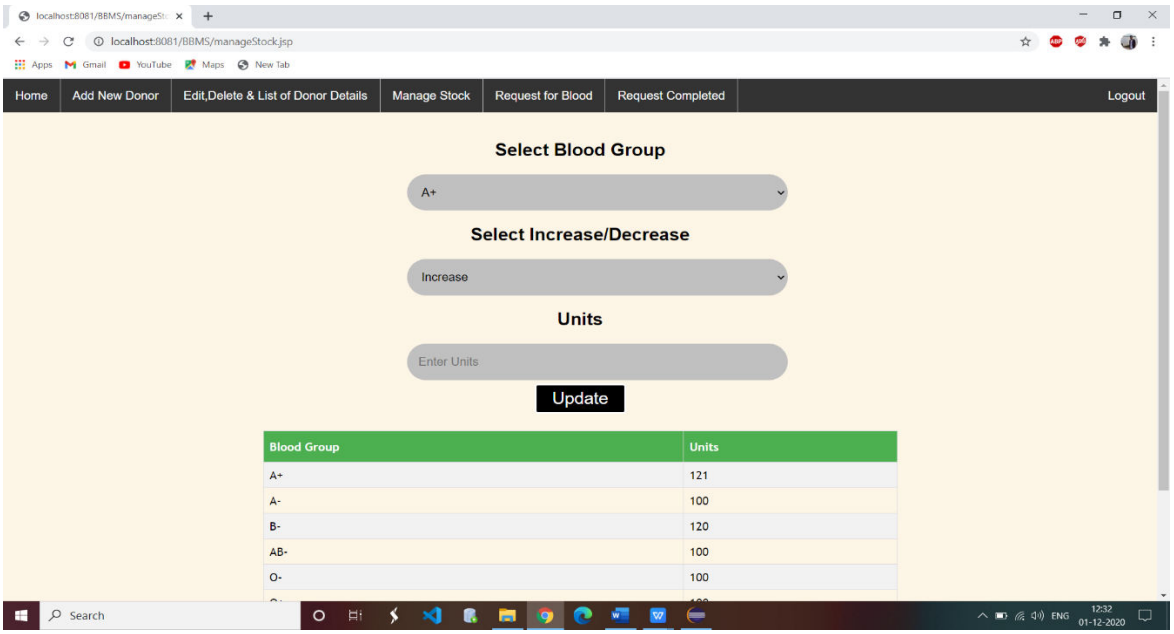


Fig 6.6: Manage stock page

Using this page admin can increase or decrease blood stock.

6.2.7 REQUEST FOR BLOOD PAGE:

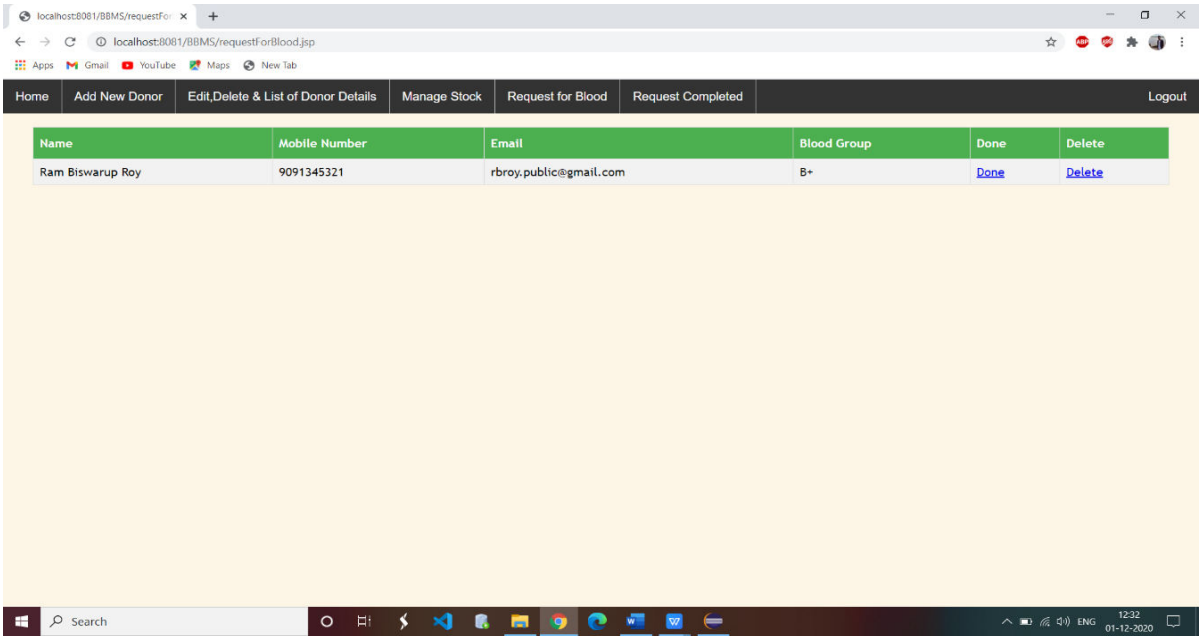


Fig 6.7: Request for blood page

In this page admin can see the list of people requesting blood.

6.2.8 REQUEST COMPLETED PAGE:

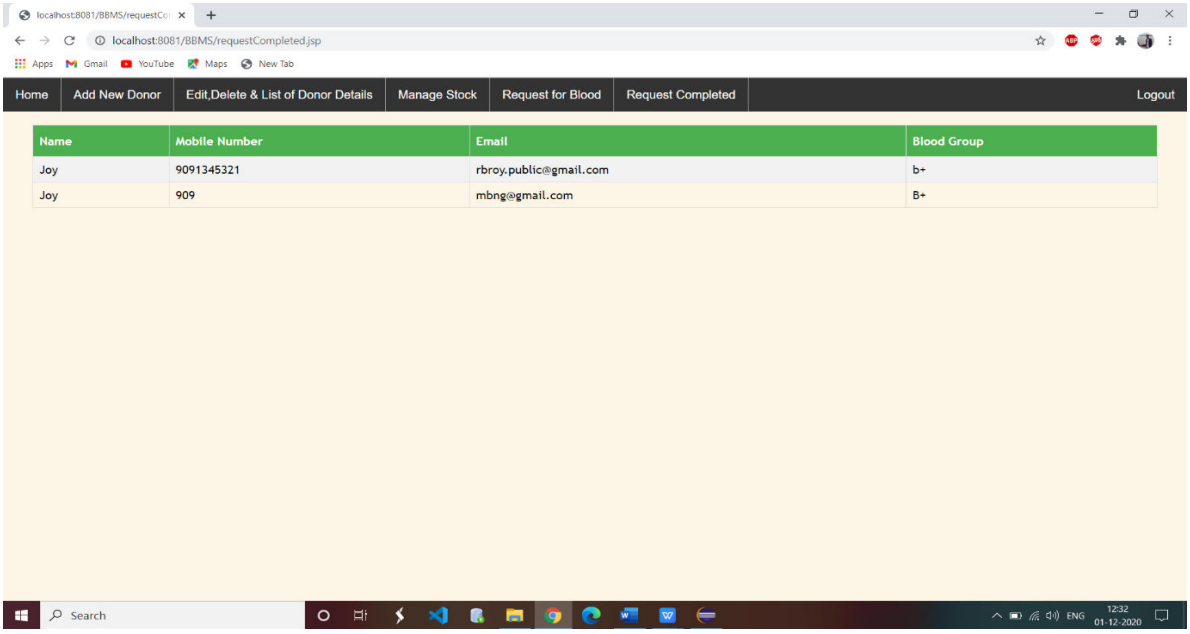


Fig 6.8: Request completed page

In this page admin can check the list of people whose blood request was completed

6.2.9 DATABASE SCREENSHOT:

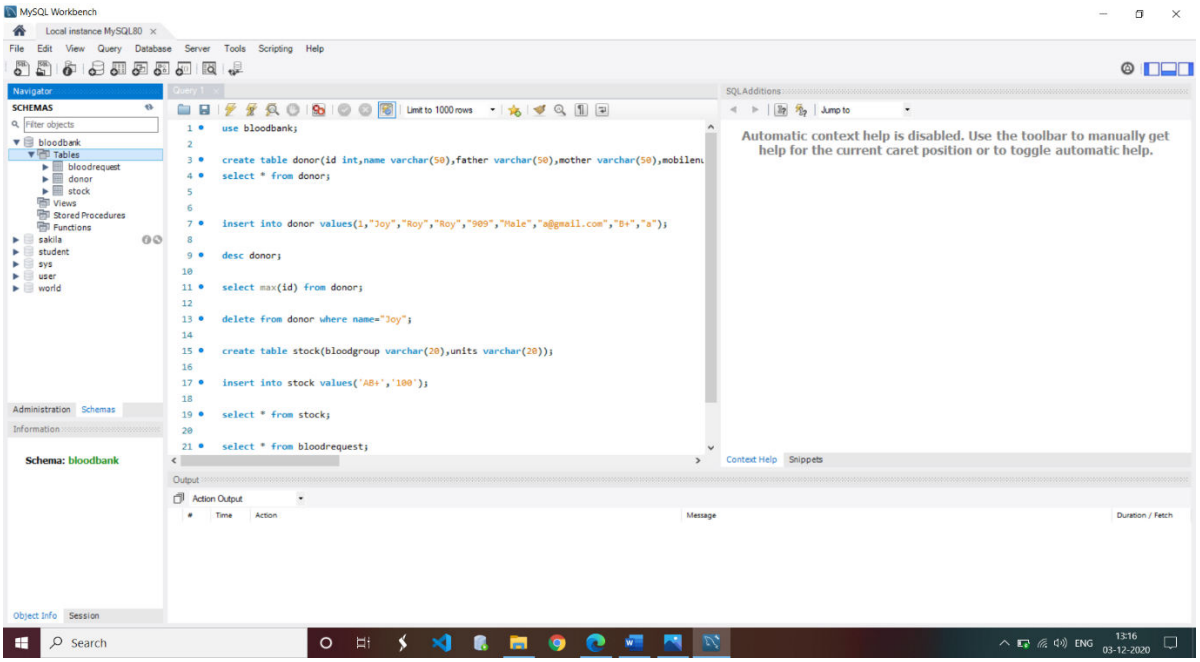


Fig 6.9: Database screenshot

This is the database screenshot in SQL Workbench. The database name is bloodbank and the tables are,

a) bloodrequest
b) donor
c) stock

CHAPTER 7

System Testing

Testing is done to identify bugs in the project. Bugs identified are fixed and once the problem is resolved, fixes are re-tested. A test case describes an input, action, or event and an expected response, to determine if a feature of a project is working correctly. A test case may contain particulars such as test case identifier, test case name, objective, test conditions/setup, input data requirements, steps, and expected results.

Test plan describes the objectives, scope, approach, and focus of a project testing effort. The process of preparing a test plan is a useful way to think through the efforts needed to validate the acceptability of a project. Complete test plan helps people understand the project validation. The following are some of the items that might be included in a test plan, depending on the particular project:

- Objective of testing effort
- Relevant requirements
- Assumptions and dependencies
- Project risk analysis
- Testing priorities and focus
- Scope and limitations of testing
- Problem tracking and resolution - tools and processes
- Software entrance and exit criteria
- Test suspension and restart criteria
- Coordination issues and open issues

Levels of testing are:

- Unit Testing
- Integration Testing
- Validation Testing
- Acceptance Testing

7.1 UNIT TESTING

It basically tests each and every individual modules of the application designed. It is similar to coding after source level has been reviewed and verified after it has been developed. It is very helpful in maintaining the code well. Codes can be reused well.

7.2 INTEGRATION TESTING

In unit testing every units are tested separately whereas in integration testing those units are tested by combining them as a group. Testing is performed to make it error-free and interactions happen between the system or integrated components.

They are two approaches in integration testing:

- Top Down Approach
- Bottom Up Approach

7.3 VALIDATION TESTING

Validation testing is done at the final stage to determine whether it satisfies the customer's requirements. By doing this we can ensure that the application meets the customer's needs.

7.4 ACCEPTANCE TESTING

This is a type of test done for acceptability. And this is done after the system testing before delivering the product.

There are following types of acceptance testing done:

- Internal Acceptance Testing
- External Acceptance Testing

- Customer Acceptance Testing
- User Acceptance Testing

Internal acceptance testing is also known as alpha testing which is performed by the organization. External acceptance testing is performed by non-organization employees.

As name suggests customer acceptance testing is performed by the customers of the organization. User acceptance testing is also known as beta testing is finally done by the end-users of the application.

CHAPTER-8

RESULTS AND DISCUSSIONS

8.1 CONCLUSION

In this project I tried to implement the Centralized Blood Bank Management System. This project is built on salesforce and can serve many advantages to the organization. As everything is centralized we can combine many objects in order to perform effective analysis. Effective analysis of data can help a lot in medical field as many other objects and fields can be added to this system for the different blood groups.

8.2 FUTURE ENHANCEMENT

There are also few features which can be integrated with this system to make it more flexible. Below list shows,

The future points to be consider-Directly getting the images for CT Scan or X-Rays from connected device,Mapped with Insurance Companies for claim processing, Billing of patients,Producing ECG using connected device, Video Conferencing facility for remote areas for treatments, Hangout for different doctors and patients at different locations.

CHAPTER 9

REFERENCE

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