A

Minor Project Report

on

AUTOMEDICAL BILLING SYSTEM

Submitted in Partial Fulfillment of

the Requirements for the Third Year

of

Bachelor of Engineering

in

Computer Engineering

to

North Maharashtra University, Jalgaon

Submitted by

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SSBT's COLLEGE OF ENGINEERING AND TECHNOLOGY, BAMBHORI, JALGAON - 425 001 (MS)
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CERTIFICATE

This is to certify that the minor project entitled *Automedical Billing System*, submitted by

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in partial fulfillment of the Third Year of *Bachelor of Engineering* in *Computer Engineering* has been satisfactorily carried out under my guidance as per the requirement of North Maharashtra University, Jalgaon.

Date: April 11, 2016
Place: Jalgaon

Ms. Priti Sharma
Guide

Prof. Dr. Girish K. Patnaik   Prof. Dr. K. S. Wani
Head   **Principal**

Acknowledgement

No work can be accomplished unless it has evolved as a result of co-operating, assistance and understanding of some knowledgeable group of people. I take the opportunity to thank our Principal **Prof. Dr. K.S.Wani** and Head of Department **Prof. Dr. Girish K. Patnaik** for providing all the necessary facilities, which were indispensable in the completion of seminar. I would like to thank my guide **Ms. Priti Sharma** for providing to be a great help by giving us guidance through her vast experience and intellectual skills. We are also thankful to all the staff members of the Computer Engineering Department. I would also like to thank the college for providing the required magazines, books and access to the internet for collecting information related to the project. Finally,I would like to thank my parents.

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Abstract

Automedical Billing System reduces the manual work. Automedical billing system is used in medical store because of that system, the billing can be done easily without any mistakes in the calculation and simultaneously it reduces the manual work. For designing the system java middleware is used. Main idea is to implement a system for medical shops and hospital for maintaining easy billing system. Data is maintain in database, Structural Query Language is used as database in this system. In existing system medical transaction and tablets information is maintained in the form of manual record.In this process data is not accurate there are chances of lossing data and retriving old record is not possible. The revolutionary trends of computerisation have reached the peaks achiving global goals in all field and sectors. The medical store inventory and billing system for medicines are getting computerised leading to a new and innovative way of approach to billing and invoicing. Atomedical billing system specifically aims to the total computerization of billing and invoicing system in hospitals, medical stores and sales departments.

Chapter 1

Introduction

"Automedical Billing System" is a system to automate the process of billing in "Medical store". This system is designed considering the billing of medicines and that system also administrates its users and customers.

This chapter is elaborated in following sections, Section 1.1 describes Background of the system, Section 1.2 describes The Motivation of the system, Section 1.3 describes Problem Defination of system, Section 1.4 describes The Scope of system, Section 1.5 describes the Objective of the system, Section 1.6 describes The Organization of the report Finally, Section 1.7 contains Summary.

1.1 Background

Chemist Shops, An automatic image reflects in our mind is the place where its difficult for a Pharmacist to remember where particular medicines are placed when there is huge crowd.Even manual billing makes the task more difficult. What if, the chemist shops get computerized automedical billing system. Pharmacists feel relieved and relaxed as they can do easy and fast billing.The major problem Pharmacists faces is expiry details of stocks so that get claim on those stocks as every medicine has its own replace and claim period. In Automedical billing system Software, By using barcode scanner the Pharmacists can manage their medicine billing very easily and within minutes of time even compare their sales and purchase so that they can manage their orders as well as suppliers. This automedical billing system software is very useful for medicine billing rather than manual billing.

1.2 Motivation

Medical billing was done almost entirely on paper, from some decades. manual process for storing of medicine records and calculation for billing but data can not be accurate, there are chances of lossing medicine data and mathematical mistakes in billing. And hence, we

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decide to proposed such system for which gives better and accurate results related to Medical billing.

1.3 Problem Definition

Medical billing was done almost entirely on paper from some decades. Manual billing makes the task more difficult to manage medicine database and the billing process such as mistakes in mathematical calculations. This system would do all the things automatic which make easier serving as a better solution to all problems.

1.4 Scope

Manual working is very time consuming. If we are using the automedical billing system, it reduces manual work as well as time. It also increases the performance In the medical stores lot of manual work will be reduced by this system.

1.5 Objective

1. Add and maintain records of available products.

2. Add and maintain suppliers details.

3. Add and maintain description of new medicines.

4. Add and maintain new entered category of products.

5. Provides economic/financial reports to the owner.

6. Provides a convenient effective solution of billing pattern.

7. Make an easy to use environment for users and customers.

1.6 Organization of the Report

chapter 1:-Include Introduction of the project as well as Background,motivation,Problem defination ,Scope and objective of the Project. chapter 2:-contains System analysis of the project.including Literature Survey, Pro- posed System, Feasibility study,Economical Feasibility, Operational Feasibility, Tech- nical Feasibility, Risk Analysis, Project Scheduling

,Effort Allocation. Chapter 3:-contains System Requirement Specification including Hardware require- ments,Software requirements ,Functional requirements, Non-Functional requirements,Other requirement and constraints. Chapter 4:-contains System Design including, System architecture, E-R diagram,Database Design,Data Flow Diagram (up to level-2), Interface Design, Module to Module Interaction (Using Collaboration Diagram). Chapter 5:-contains UML diagrams include Use Case Diagram, Class Diagram, Sequence Diagram, Activity Diagram, Component Diagram, Deployment Diagram, State Diagram Diagram. Chapter 6:-contains Implementation include Implementation details, Implementation environment, Flow of the system. Chapter 7:-contains Result of the system.

1.7 Summary

This chapter covers the Introduction of the Automedical billing system, background , motivation, Problem defination, Scope, Objective and organization of project. In next chapter, the system analysis is described.

Chapter 2

System Analysis

System analysis is the process of gathering and interpreting facts, diagnosing problems and using the facts to improve the system. It specifies what system should do.

This chapter is elaborated in following sections: Section 2.1 describes literature survey, Section 2.2 describes proposed system, Section 2.3 describes feasibility study which includes economical feasibility, operational feasibility and technical feasibility, Section 2.4 describes risk analysis which include need of risk analysis, software risk, project risk, technical and business risk, Section 2.5 describes project scheduling, Section2.6 describes effort allocation Finally, Section 2.7 contains Summary.

2.1   Literature Survey

Medical Store, An automatic image reflects in our mind is the place where its difficult for a Pharmacist to remember where particular medicines are placed when there is huge crowd and more difficult to stop pilferage of the medicines. Even manual billing makes the task more difficult. If the chemist shops get computerized automedical billing system. Pharmacists feel relieved and relaxed as they can do easy and fast billing as well as able to keep eyes on pilferage. The major problem Pharmacists faces is expiry details of stocks so that get claim on those stocks as every medicine has its own replace and claim period. In Automedical billing system Software, By using barcode scanner the Pharmacists can manage their medicine billing very easily and within minutes of time even compare their sales and purchase so that they can manage their orders as well as suppliers. This automedical billing system software is very useful for medicine billing rather than manual billing.

2.2   Proposed System

The proposed system is user friendly because the retrieval and storing of data is fast and data is maintained efficiently. Moreover the graphical user interface is provided in the proposed

system, which provides user to deal with the system very easily. Automedical billing system. Pharmacists feel relieved and relaxed as they can do easy and fast billing as well as able to keep eyes on pilferage. The major problem Pharmacists faces is expiry details of stocks so that get claim on those stocks as every medicine has its own replace and claim period. In Automedical billing system Software, By using barcode scanner the Pharmacists can manage their medicine billing very easily and within minutes of time even compare their sales and purchase so that they can manage their orders as well as suppliers. This automedical billing system is very useful for medicine billing rather than manual billing.

2.3 Feasibility Study

The feasibility study is carried out to test whether the proposed system is worth being implemented. Feasibility study is a test of system proposed regarding its work ability, its impact on the organization ability to meet user needs and effective use of resources. It is usually carried out by a small number of people who are familiar with the information system techniques, understand the part of the business or organization that will be involved or effected by the project and are skilled in the system analysis and design process.

2.3.1 Economical Feasibility

The procedure is to determine the benefits and savings that are expected from a candidate system and compare it with the costs. If a benefit outweighs costs, then the decision is made to design and implement the system. Economical feasibility is a cost benefit. In our project we require Netbean software and also require java development tool kit this is also freeware and we require MySQL database this is also freeware, so our project is feasible for developer and client

2.3.2 Operational Feasibility

Operational Fesibility is beneficial if they can be turned into information system will meet the organization operating requirement. The System is user friendly. This feasibility in which some software is require. This feasibility is operational feasibility because no cost required.

2.3.3 Technical Fesibility

At first, It is necessary to check that (Proposed system)is technically feasible or not. Also determine the technology and skill it is necessary to carry out the project. If they are not available then find out solutions for them. In our project shows about Medicine billing,

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maintain medicine record,suppliers details. In our project there are view type of tools are used such as Netbeans 8.1 version , MySQL, JRE 1.8 kit to developed the system.

1. SOFTWARE:

   JRE 1.8

   Database SQL server

   JDBC

   Netbean 8.1

2. HARDWARE:

   RAM

   HDD

2.4   Risk Analysis

Risk analysis and management are a series of steps that help a software team to understand and manage uncertainty. Many problem can plague a software project. A risk is a potential problem it might happen, it might not But regardless of the outcome, its a really good idea to identify it, assess its probability of occurrence, estimate its impact and establish a contingency plan should the problem actually occure. Everyone involved in the software process managers, software engineer and customer participate in the risk analysis and management. There will be following possible risk which can be related to the project:

1. Some time system may fail when there is problem occured in hardware devices.

2. When the computer system get hanged then the software become terminate.

2.4.1   Need of Risk Analysis

Think about the scout motto:Be prepared. Software is a difficult undertaking. Lots of things can go wrong and frankly, many often do. Its for this reason that being prepared understanding the risks and taking proactive measures to avoid or manage a key element of good software project management.

2.4.2   Software Risk

Although there has been considerable debate about the proper definition for software risk, there is general agreement that risk always involves two characteristics: Uncertainty:The risk may or may not happen i.e. there are no 100% probable risks. Loss:If the risk becomes a

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reality, unwanted consequences or losses will occure. When risks are analyzed, it is important to quantify the level of uncertainty and the degree of loss associated with each risk. To accomplish this, different categories of risks are considered.

2.4.3 Project Risk

Threaten the project plan that is if the project risks become real, it is likely that project schedule will slip and that cost will increase. Project risks identify potential budgetary, schedule personnel(staffing and organization)resource, customer and requirement of technical member means technical team is unavailable according to our project plan and estimation and if our project is not completed within time in this situation project risk can occure.

2.4.4 Technical Risk

Threaten the quality and timeliness of the software to produced. If a technical risk becomes a reality, implementation,interface, verification and maintenance problem. In addition specification ambiguity, technical uncertainty,technical obsolescence and leading edge technology are also risk factor. Technical risks occure because the problem is harder to solve than we through would be. In our project if any module of our project is not work properly according to our expectation then technical risk may occure.

2.4.5 Business Risk

1. Building a excellent product or system that no one really wants(market risk).

2. Buliding a product that no longer fits ino the overall business strategy for the company(strategic risk).

3. Building a product that the sales force does not understand how to sell.

4. Losing the support of senior management due to a change in focus or a change in people(management risk).

2.5 Project Scheduling

Software project scheduling is an activity that distributes estimated effort to specific software engineering task. It is important to note, however, that schedule evolves over time. During early stages of project planning, a macroscopic scheduled is developed. This type of schedule identifies all major software engineering activities and the product functions to which they are applied. As the project gets under way,each entry on macroscopic schedule is refined into a detailed schedule. Figure 2.1 shows Project scheduling. It gives the details of how much time is required to complete each and every phase of software engineering for this project.

Duration / Phases	July	August	September	October	November	December	January	February	March	April
Literature Survey	25%	100%								
Requirement Analysis			35%	100%						
Planning		25%	50%	100%						
Analysis			75%		100%					
Design					35%	75%		80%	100%	
Implementation					25%		35%	50%	75%	100%
Testing								50%	100%	

Figure 2.1: Project Scheduling

2.6 Effort Allocation

Software engineer or team of engineers must incorporate a development strategy that encompasses the process, methods and tools layers described. This strategy often referred to as a process model or software engineering paradigm. A process model for software engineering is chosen based on the nature of the project and application, the methods and tools to be used and the controls and deliverables that are required. There are many process models in the software engineering, but we have chosen waterfall model because the project is totally

dependent on previous modules. Another Reason for choosing this model is to provide better user satisfaction.

Allocation of efforts to all project patterns project means team work;project is developed by contribution of effort of team. So whole project is divided into modules and number of modules is allotted to team members. After completion of each module, it will be link from one module to another module to form a complete project. The Figure 2.2 shows the efforts and involvement of every member in this project.

Names / Phases	Pooja Sapkale	Punam Patil	Jidnyasa Bhirud	Pooja Chaudhari
Literature Survey	✓	✓	✓	✓
Requirement Gathering	✓		✓	
Project Planning		✓		✓
Analysis	✓	✓	✓	
Designing	✓	✓		
Implementation	✓	✓	✓	✓
Testing			✓	✓

Figure 2.2: Effort Allocation

2.7 Summary

This chapter describes the overall phases of project development and also covers the literature survey of the project,proposed system, Feasibility study,overview of risks, Project Scheduling and Effort Allocation of proposed system. The next chapter describes the Software Requirement Specification.

Chapter 3

System Requirement Specification

Software Requirement Specification is the official statement of what is required to the system developers. It should include both user requirements and a detailed specification of the system requirements. Requirement analysis is done in order to understand the problem the software system is to solve.

This chapter is elaborated in following sections: Section 3.1 describes the Hardware Requirements. Software Requirements are explained in Section 3.2. Section 3.3 explains the Functional Requirements. Non Functional Requirements are described in Section 3.4. Section. Finally, Section 3.5 contains Summary.

3.1 Hardware Requirements

The hardware requirements includes:

1. RAM

2. HDD

3. Barcode scanner

3.2 Software Requirements

The software requirements includes:

1. JRE 1.8

2. Database SQL Server

3. JDBC

4. Netbean 8.1

3.3 Functional Requirements

Functional requirements related to the proposed system. only admin is updating, searching, deleting the medicine record and medical staff have authority to generate only medicine bill.

3.4 Non Functional Requirements

Non functional requirement include various requirement but the most prominent are showing databases and provides new supplier details.

3.5 Summary

In this chapter, Hardware Requirements, Software Requirements, Functional and Non-Functional Requirements are explained. In next chapter, the System Design is described through various UML diagram.

Chapter 4

System Design

System design provides the understanding and procedural details necessary for implementing the system. This chapter is elaborated in following sections: Section 4.1 describes the System Architecture. E-R Diagrams are described in Section 4.2. Section 4.3 described the UML diagram. Finally, Section 4.4 contains Summary.

4.1 System architecture

The system architecture provide details of how the components or modules are integrated and is described with the help of Unified Modelling Diagrams.

4.2 E-R Diagram

Entity-Relationship model and the operations to be done on those entities shown by ER diagram. In the ER diagram there are some shapes such as rectangle, diamond, elipse. Rectangle used for the purpose, Elipse used for the attributes and diamond is used for the taking decision of given system. All those shapes and there uses are shown in the following figure.
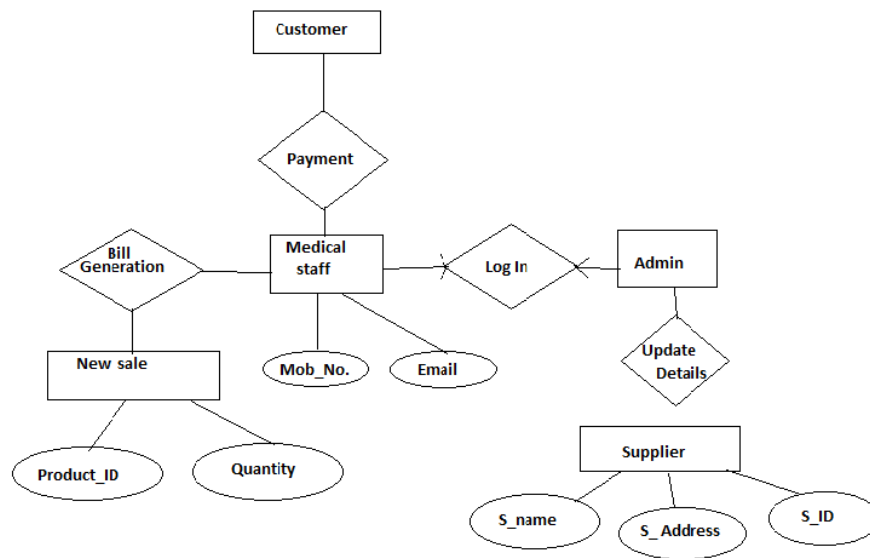
Figure 4.1: ER Diagram for Automedical billing system

4.3 Database Design

1. Medicine Table

Field	Type	Null	Key	Default	Extra
Barcode_no	Varchar(100)	NO		NULL	
Batch_no	Varchar(10)	NO	PRI	NULL	
M_name	Varchar(50)	YES		NULL	
M_company	Varchar(50)	YES		NULL	
M_qty	int(10)	YES		NULL	
exp_date	Varchar(50)	YES		NULL	
pur_date	Varchar(50)	YES		NULL	
M_type	Varchar(50)	YES		NULL	
M_price	float	YES		NULL	
S_id	int(10)	YES		NULL	
S_name	Varchar(50)	YES		NULL	

Figure 4.2: Medicine Table for Automedical billing system

2. Sales Table

Field	Type	Null	Key	Default	Extra
s_id	int(10)	YES	PRI	NO	
s_name	varchar(50)	YES		NO	
s_address	varchar(500)	YES		NO	
s_phone no	varchar(20)	YES		NO	
email_id	varchar(30)	YES		NO	

Figure 4.3: Sales Table for Automedical billing system

3. Users Table

Field	Type	Null	Key	Default	Extra
username	varchar(20)	YES		NULL	
password	varchar(20)	YES		NULL	
type	varchar(20)	YES		NULL	

Figure 4.4: Users Table for Automedical billing system

4. Supplier Table

Field	Type	Null	Key	Default	Extra
s_id	int(10)	YES	PRI	NO	
s_name	varchar(50)	YES		NO	
s_address	varchar(500)	YES		NO	
s_phone no	varchar(20)	YES		NO	
email_id	varchar(30)	YES		NO	

Figure 4.5: Sales Table for Automedical billing system

4.3.1 Module to Module Interaction (Using Collaboration Diagram)

Automedical billing system software module to module interaction barcode scanner, medicine content, medicine name that are shown in following collaboration diagram.

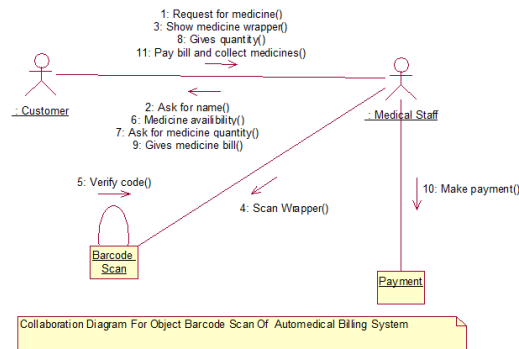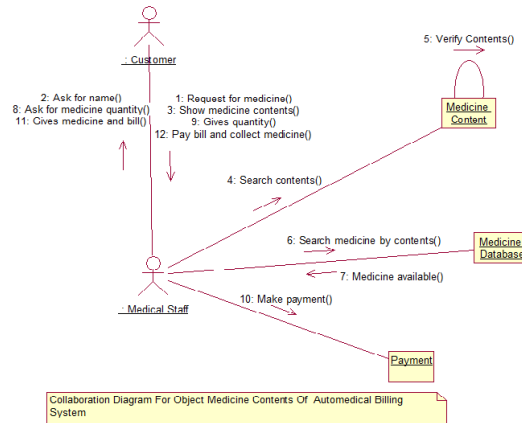The following figure shows collaboration diagram for barcode scanner.

Figure 4.6: Collaboration Diagram for Automedical billing system
the collaboration diagram for the barcode scan module shown in figure

The following figure shows collaboration diagram for medicine content.

Figure 4.7: Collaboration Diagram for Automedical billing system
the collaboration diagram for the medicine content module shown in figure

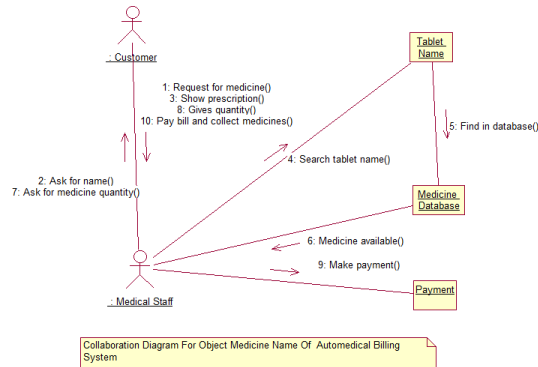The following figure shows collaboration diagram for medicine name.

Figure 4.8: Collaboration Diagram for Automedical billing system

the collaboration diagram for the medicine name module shown in figure

4.4 UML Diagrams

In the Unified Modeling Language(UML)contain two main types ie. structural Diagram and behavior Diagram . In stuctural diagram contain usecase , collaboration, class, component, deployment, object, package, composite structure diagrams and behavioral diagram in which sequence, communication, timing, statechart, activity diagrams. Basic structural diagram is class diagram and advance structural diagrams are object and package diagrams. Basic behavioral diagrams are usecase, interaction, activity diagrms. and advance behavioral diagram in which statechart diagram.

4.4.1 Use Case Diagram

Usecase diagram that shows functionality of given system. The figure 4.9 shows some functions barcode scanner,medical database and actors customer and medical staff.
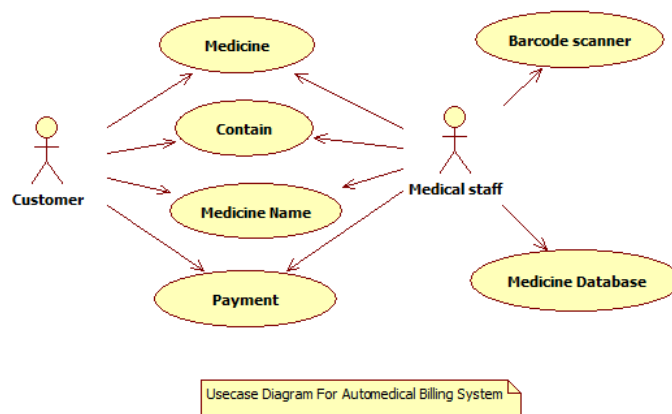
Figure 4.9: Usecase Diagram for Automedical billing system

the Usecase diagram for the automedical billing system shown in figure 4.9

4.4.2 Class Diagram

Class diagram shows structural aspect of a given system. The figure 4.10 shows some classes such as medical staff, medicine database, customer, barcode scanner, medicine content with there attributes and operations.
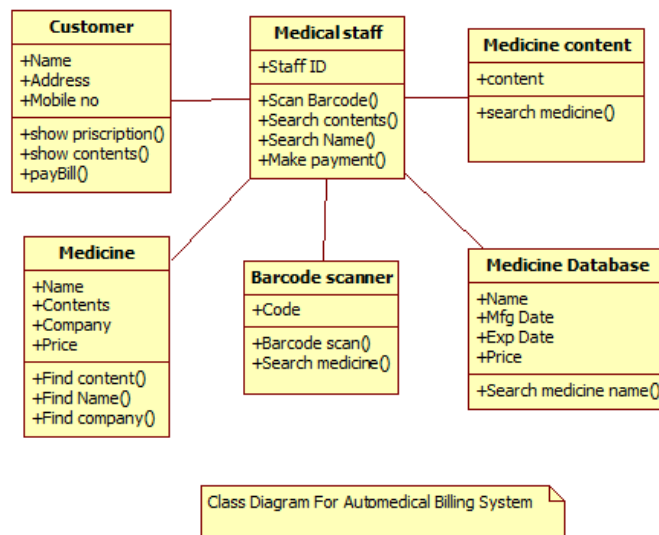

Figure 4.10: Class Diagram for Automedical billing system

4.4.3 Sequence Diagram

Sequence diagram shows flow of functionality. In the Figure 4.11 show sequence diagram for the object Barcode scanner, Figure 4.12 shows sequence diagram for the object medical content and Figure 4.13 shows the sequence diagram for object medicine name.
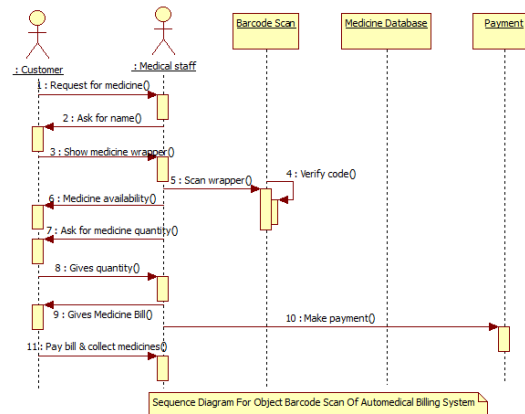

Figure 4.11: Sequence Diagram for Automedical billing system

the sequence diagram for the barcode scan shown in figure 4.11.

Sequence diagram shows flow of functionality. In the figure 4.12 show sequence diagram
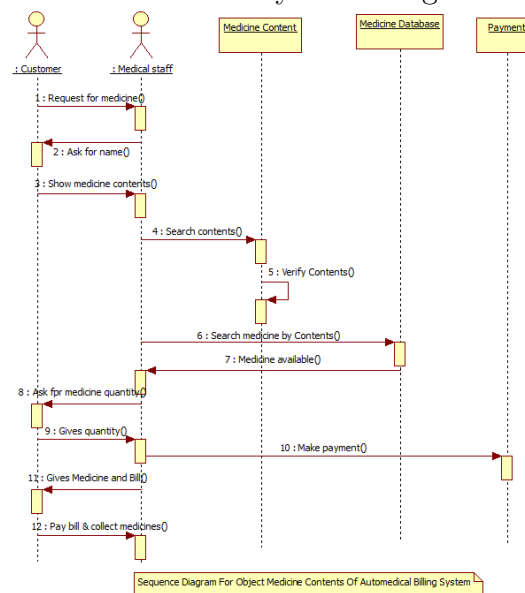

Figure 4.12: Sequence Diagram for Automedical billing system

for the object medicine content. the sequence diagram for the medicine content shown in figure 4.12.

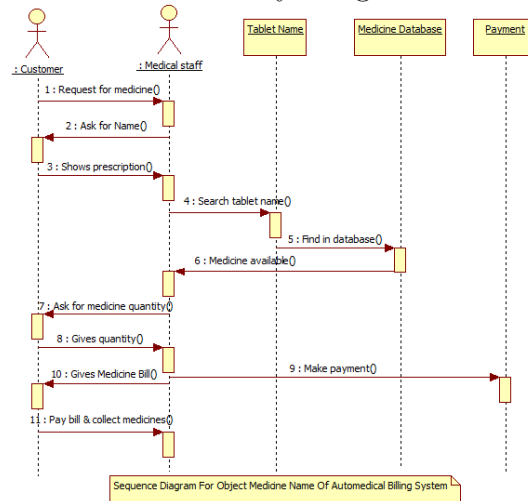Sequence diagram shows flow of functionality.In figure 4.13 shows the sequence diagram

Figure 4.13: Sequence Diagram for Automedical billing system

for object medicine name.the sequence diagram for the medicine name shown in figure 4.13.

4.4.4 Activity Diagram

The activity diagram shows detailing of two states. Figure 4.14 shows activity diagram for barcode scanner, Figure shows activity diagram for medicine content and figure shows activity diagram for medicine name.
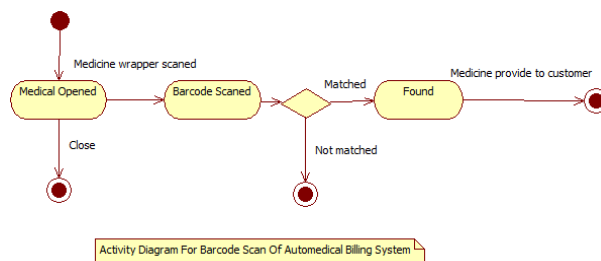

Figure 4.14: Activity Diagram for Automedical billing system

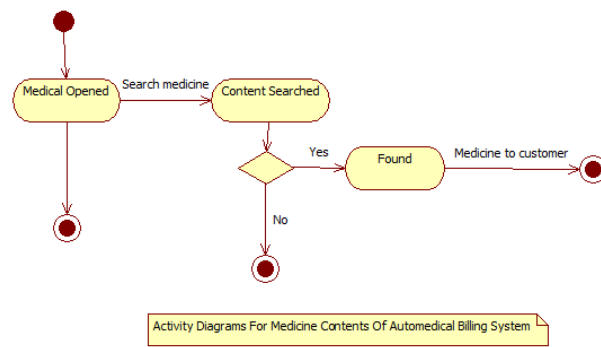The Activity diagram for the barcode scanner shown in figure 4.14.

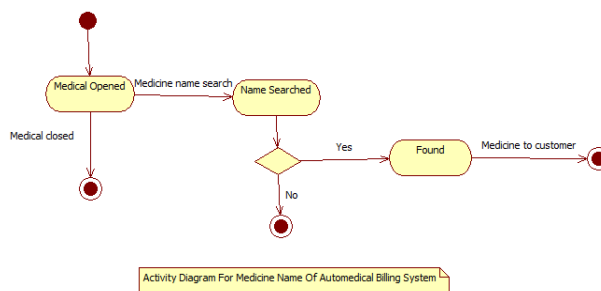Figure 4.15: Activity Diagram for Automedical billing system

Figure 4.16: Activity Diagram for Automedical billing system

The Activity diagram for the medicine name shown in figure 4.16.

4.4.5 Component Diagram

Component diagram shows dependancy of component of a given system. In the figure shows the dependant component users, medical staff, tablet of automedical billing system. The component diagram for the automedical billing system shown in figure 4.17.
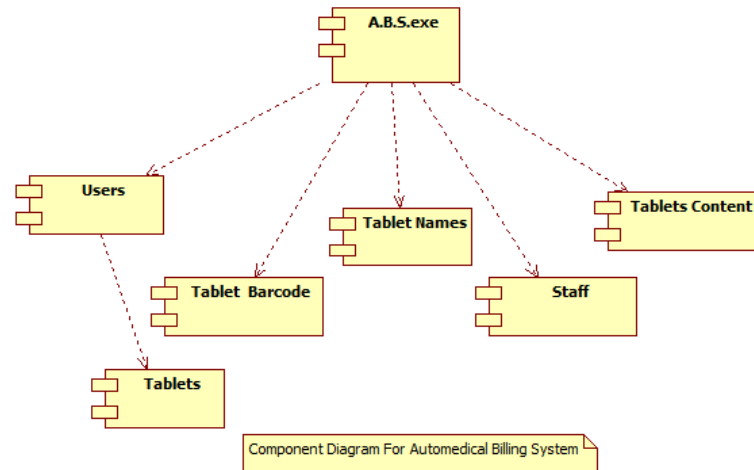

Figure 4.17: Component Diagram for Automedical billing system

4.4.6 Deployment Diagram

The deployment diagram shows external layout of given system. Figure 4.18 shows application server of automedical billing system and that connected with the medicine database, barcode scanner, users and printer by using the private network.
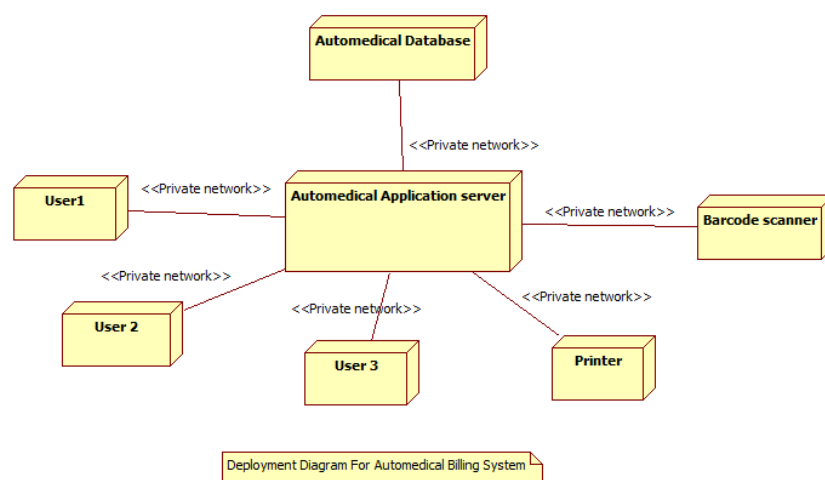

Figure 4.18: Deployment Diagram for Automedical billing system

The Deployment diagram for the automedical billing system shown in figure 4.18.

4.4.7 State Diagram

The State diagram shows external layout of given system. It also called as statechart diagram or state transition diagram. Figure shows states of automedical billing system and that connected with the medicine database ,barcode scanner, users and printer by using some events. The State diagram for the automedical billing system shown in figure 4.19.
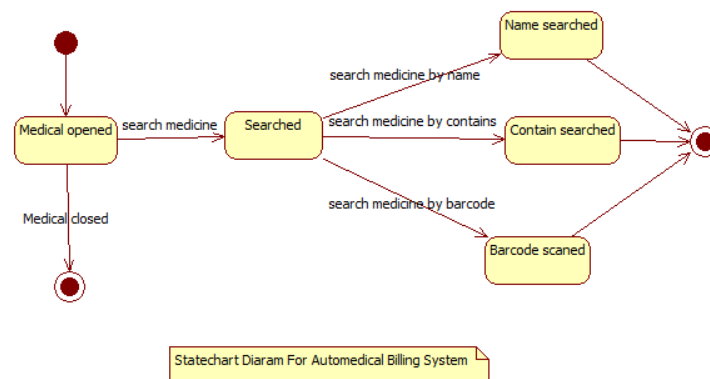

Figure 4.19: State Diagram for Automedical billing system

4.5 Summary

In this chapter we study overall detail of this project like system architecture, E-R diagram, database design, module to module interaction (by using collaboration diagram)and UML diagrams In the next chapter describes Implementation part.

Chapter 5

Implementation

Important phase in system development is the successful implementation of the new system design. Implementation includes all those activities that take place to convert from the old system to the new system.

This chapter is elaborated in following sections: Section 5.1 describes the Implementation Details. Implementation Environment is explained in Section 5.2. Section 5.3 explains the Flow of system in development. Finally, Section 5.4 contains Summary.

5.1 Implementation Details

Automedical Billing System basically has two main modules for proper functioning:-

1. Admin module is has rights for creating, updating,deliting entry of medicine and new supplier details.

2. Medical staff has a rights of generating medicine bill by using barcode scanner.

5.2 Implementation Environment

It includes description of implemented environment such as which platform and language and technology that will be used, Back end of the software is Structural Query Language, Front-end of the software is Java that will be used.

5.3 Flow of system development

Following steps describes the flow of system in development:

1. Design of UML 2.0 diagrams for the system software.

2. Creating database.

3. Installation of netbeans and mysql software for the software requirement purpose.

5.4   Summary

This chapter explains Implementation details of the project like Implementation Environment and Flow of System. The next chapter describes the system testing.

Chapter 6

System Testing

System testing is performed to check whether the system is properly working or not. The results of testing may include errors, if so one should remove them to make system working properly.

This chapter is elaborated in following sections: Section 6.1 describes How to implement Testing. Test Cases and Test Results are described in Section 6.2. Finally, Section 6.3 contains Summary.

6.1   How to implement testing

Testing is done to find errors and to remove them. System will work properly if it is error free. There are many ways to test the system.

6.2   Test cases and Test Results

Test case is an object for execution for other modules in the architecture does not represent any interaction by itself. A test case is a set of sequential steps to execute a test operating on a set of predefined inputs to produce certain expected outputs. There are two types of test cases:-manual and automated. A manual test case is executed manually while an automated test case is executed using automation. Test case is an object for execution for other modules in the architecture. Ideally, test cases that check error conditions are written separately from the functional test cases and should have steps to verify the error messages and logs. Realistically, if functional test cases are not yet written, it is ok for testers to check for error conditions when performing normal functional test cases. It should be clear which test data, if any is expected to trigger errors. cuture does not represent any interaction by itself. A test case is a set of sequential steps to execute a test operating on a set of predefined inputs to produce certain expected outputs. There are two types of test cases:- manual and automated.

1. TEST CASE 1:

   Validation of Phone no:

2. TEST CASE 2:

   Validation of Email

6.3   Summary

In this chapter we study overall detail of this. In the next chapter we study result and analysis.

Chapter 7

Results and Analysis

Results of system will used to illustrate how the system is designed. Analysis summarizes the qualitative and quantitative analysis that explains why results are relevant. It includes comparison of implemented system with other implemented systems.

This chapter is elaborated in following sections: Section 7.1 contains the Snapshot of Important Processing with its Explanation. Finally, Section 7.2 contains Summary.

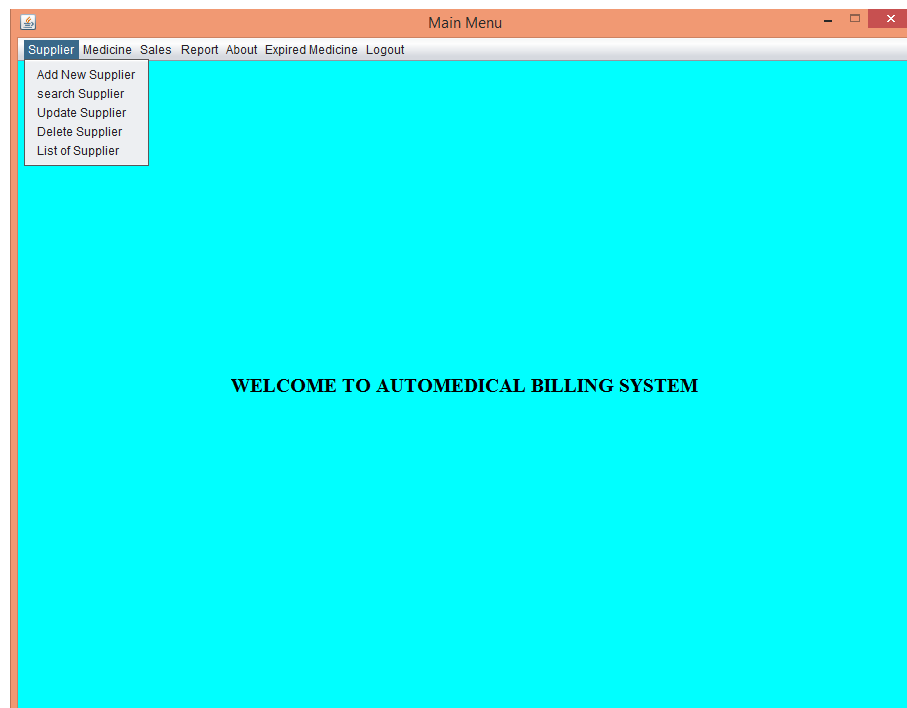## 7.1 Sample snapshot of important processing and its explanation.

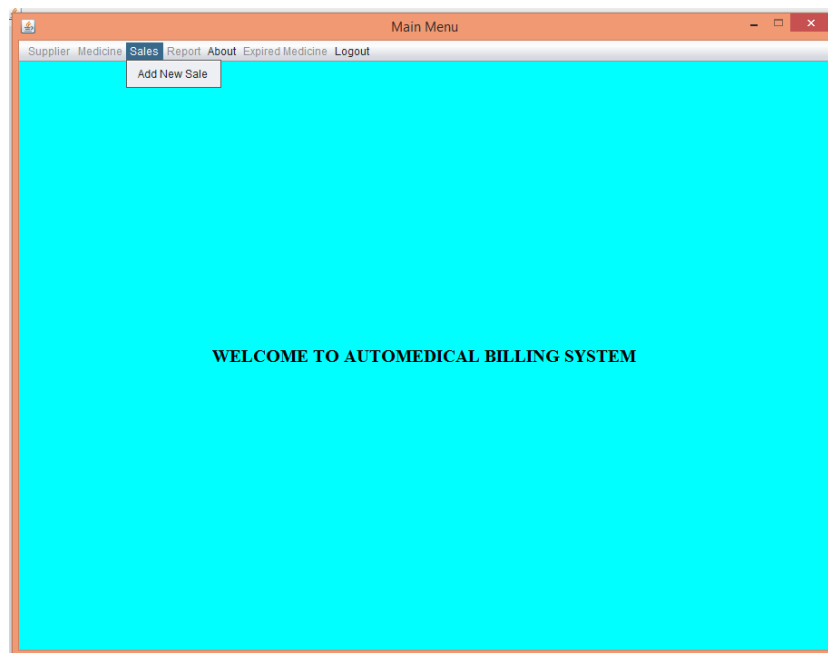Figure 7.1: After login Page Welcome in Automedical billing system

Figure 7.2: Select new sales in Automedical billing system

In the figure shows the menu page as admin, who have authority to add, delete insert, update and search of the medicines.

In figure shows the menu page as a medical staff, who do not have permission to add, delete, update and search of the medicines. Medical staff have authority to access the sales part of the system.

Figure 7.3: Select Product and Quantity in Automedical billing system

Figure 7.4: Print screen of Automedical billing system

7.2 summary

This chapter explains results of the system using various snapshots. The next chapter contains the conclusion and future scope.

Chapter 8

Conclusion and Future Scope

Automedical billing system reduces manual work. By this system huge ammount of data can be stored,this system is efficient for the mathematical calculation like billing of the tablets. Due to this system searching medicines,updating medicines,deleting medicines and searching,updating deleting details of supplier done easily. This system is handled by admin as well as the medical staff who are worked in medical therefore Automedical Billing Software system is user friendly.

Further the system will show rack number in which medicines are placed so that performanace of billing can be increase. The system will search the medicines by contents from huge database. This system enable store keeper to maintain a great database of all customers visited and purchase product from store. System will enable to see report regarding product and category. Easy to maintain in future prospect.

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