

HEALTHMART

Project report submitted in partial fulfillment of the requirement for the
degree of

Bachelor of Technology

In

Computer Science and Engineering

By

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Under the supervision of

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To



Department of Computer Science & Engineering and Information Technology

**Jaypee University of Information Technology Wahnaghat, Solan-
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CERTIFICATE

Candidate's Declaration

This is to certify that the work which is being presented in the report entitled “**Healthmart**” in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in Computer Science and Engineering/Information Technology** submitted in the department of Computer Science & Engineering and Information Technology, Jaypee University of Information Technology, Waknaghat is an authentic record of our own work carried out over a period from April 19, 2017 to May 25, 2017 under the supervision of **Ms. Priya Hegde** (Senior System Engineer in the department of Education, Training and Assessment at Mysuru Development Centre, Infosys Technologies Ltd, Karnataka).

The matter embodied in the report has not been submitted for the award of any other degree or diploma.

Harsh Kumar Gupta(131419)

This is to certify that the above statement made by the candidates is true to the best of my knowledge.

Ms. Priya Hegde
Senior System Engineer,
ETA, Infosys Technologies Ltd.
Dated: 25th May, 2017

ACKNOWLEDGEMENT

We owe our profound gratitude to our project supervisor **Ms. Priya Hegde**, who took keen interest and guided us all along in my project work titled —**Healthmart**, till the completion of our project by providing all the necessary information for developing the project. The project development helped us in research and we got to know a lot of new things in our domain. We are really thankful to her.

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ABSTRACT

In computing, Oracle Application Development Framework, usually called Oracle ADF, provides a commercial Java framework for building enterprise applications. It provides visual and declarative approaches to Java EE development. It supports rapid application development based on ready-to-use design patterns, metadata-driven and visual tools. Oracle Application Development Framework (Oracle ADF) is an innovative, yet mature Java EE development framework available from Oracle and directly supported and enabled by the award winning development environment, Oracle JDeveloper 11g.

ADF simplifies Java EE development by minimizing the need to write code that implements the application's infrastructure allowing the developers to focus on the features of the actual application. Oracle ADF provides these infrastructure implementations as part of the framework. Creating the user experience is as simple as dragging-and-dropping the desired business services onto a visual page designer and indicating what type of component should represent that data.

Agile software development is used in the development process which is a set of principles for software development under which requirements and solutions evolve through the collaborative effort of self-organizing cross-functional teams. It advocates adaptive planning, evolutionary development, early delivery, and continuous improvement, and it encourages rapid and flexible response to change. These principles support the definition and continuing evolution of many software development methods.

Vision

To be a globally respected corporation that provides best-of-breed business solutions, leveraging technology, delivered by best-in class people

ABOUT THE ORGANIZATION

1.1 About

Infosys offers a suite of mobile, web and software applications as a solution to industry. We were founded in November 2011. With unparalleled domain competencies in mobile and web, Infosys is poised to take on critical challenges that the industry manifests. Our culture is values based, and we assure the highest ethical standards of integrity, transparency and corporate governance. Our value system is driven by STAR, the acronym for our core values of Share, Time, Achieve, and Respect.

1.2 Our Mission

Infosys is committed to the communities in which it operates. This has led to the creation of Infosys Foundation to support the underprivileged sections of society. A not-for-profit initiative aimed at fulfilling the social responsibility of Infosys Ltd., the Infosys Foundation creates opportunities and strives towards a more equitable society.

Established in 1996, the Infosys Foundation supports programs in the areas of education, rural development, healthcare, arts and culture, and destitute care. Its mission is to work in remote regions of several states in India.

The Infosys Foundation takes pride in working with all sections of society, selecting projects with infinite care, and working in areas that traditionally overlooked by society at large.

1.3 Training programs

As the world's largest corporate university, the Infosys global education centre in the 337-acre campus has 400 instructors and 200 classrooms with international benchmarks at its core. Established in 2002, it had trained around 125,000 engineering graduates by June 2015. It can train 14,000 employees at a given point of time on various technologies.

The Infosys Leadership Institute (ILI), based in Mysore has 96 rooms and trains about 400 Infosians annually.

In addition to above, Infosys Training Centre in Mysore also provides number of extra-curricular facilities like Tennis, Badminton, Basketball, Swimming pool, Gym etc.



INTRODUCTION TO PROJECT

Java EE is a standard, robust, scalable, and secure platform that forms the basis for many of today's enterprise applications. Java EE provides a set of specifications for building multi-tier applications using the Java language. In the past, there was a direct correlation between the robust nature of an application to the complexity required to achieve it. Oracle Framework provides the best of infrastructure code to implement applications thereby removing the effort involved in an organization and allowing a team to jump right in to adding value versus building an infrastructure.

In modern application development, this framework plays an important role without any requirement for a mature framework and the development of such application is quite easy to deploy. Oracle has developed this innovative and stable Java EE development framework, Oracle Application Development Framework (ADF). Oracle ADF provides infrastructure support as part of the framework, so that developers can concentrate on the actual application development.

The term agile was adopted by the authors of the Manifesto for Agile Software Development (often referred to as the Agile Manifesto for short). Usually written as Agile (with a capital A), this is increasingly seen in normal sentence case.

METHODOLOGY AND TECHNOLOGIES USED

There are various methodologies used in the development of the application which are described as follows:

3.1 ORACLE ADF:

Oracle Application Framework (OA Framework or OAF) is a proprietary framework developed by Oracle Corporation for application development within the Oracle E-Business Suite (EBS). The framework is also available to customers for personalization, customization and custom-application development. ORACLE ADF is a framework, which means that much of its functionality is contained in a set of libraries.

Specific applications may change or add to the functionality of the library classes, creating specific business components. Oracle ADF application modules are business components that represent particular application tasks. The application module provides a data model for the task by aggregating the view object and view link instances required for the task while also providing services that help the client accomplish the task. An application module can assist with tasks like updating customer information, creating a new order, and processing salary increases.

3.2 AGILE:

Agile Development is an umbrella term for several iterative and incremental software development methodologies. The most popular agile methodologies include Extreme Programming (XP), Scrum, Crystal, Dynamic Systems Development Method, Lean Development, and Feature-Driven Development.

Agile software development focuses on keeping code simple, testing often, and delivering functional bits of the application as soon as they're ready. The goal of ASD is to build upon small client-approved parts as the project progresses, as opposed to delivering one large application at the end of the project.

3.3 ORACLE SQL Developer:

SQL Developer is designed for database developers who spend large portions of their working days involved in database tasks, possibly also supporting application developers and DBAs. The role of SQL Developer is to simplify database development tasks, thus increasing developer productivity.

It is a free graphical tool that enhances productivity and simplifies database development tasks. Designed for Oracle Database developers, SQL Developer simplifies development cycles and reduces the need to buy third-party tools for developing and debugging SQL and PL/SQL code.

The addition of this tool underscores Oracle's commitment on improving the productivity and supporting the needs of the database developer community. SQL Developer allows us to create stored database connections using a simple dialog. Using these connections, we can browse the database, create schema objects, execute and tune ad-hoc SQL statements, run reports against the data dictionary and create, execute and debug PL/SQL

ORACLE ADF

Oracle Application Development Framework (Oracle ADF) is an end-to-end application framework that builds on Java EE standards and open-source technologies to simplify and accelerate implementing enterprise applications. Oracle ADF is suitable for enterprise developers who want to create applications that search, display, create, modify, and validate data using web, mobile, and desktop interfaces.

Oracle ADF makes it easy to develop agile applications that expose data as services by coupling a service interface to the built-in business services in ADF. This separation of business service implementation details is performed in Oracle ADF via metadata. Use of this metadata-driven architecture enables application developers to focus on the business logic and user experience, rather than the details of how services are accessed.

- Entity objects: These are the core elements of database interaction. They correspond with model layer and business services and business logic is implemented here.
- View objects: These are the elements that are considered as display elements. View objects can be updatable or read only. Updatable view objects are derived from entity objects as any changes in the view objects will reflect in entity object and then reflect in database. Read only view objects can be developed using standard SQL queries.
- Application module: These are the core parts of any ADF application as they include the view objects. Any view that needs to be displayed must be added to application module. It can also be used for testing the business services as business services need to be validated for correct results before attaching them in the view part.

4.1 ADF Architecture:

Oracle ADF implements the Model-View-Controller design pattern and offers an integrated solution that covers all the layers of this architecture with solution to areas such as:

- Object-Relational Mapping (ORM)
- Data persistence layer
- Reusable controller layer
- Rich user interface based on JSF technology
- Data binding mechanism with the UI layer
- Security features

ADF Model is a central part of Oracle ADF, enabling you to create ADF applications based on different types of business services. ADF Model implements data controls and data bindings. Data controls abstract the implementation technology of a business service by using standard metadata interfaces to describe the service's operations and data collections, including information about the properties, methods, and types involved.

In Oracle JDeveloper, developers can view that information as icons that they can easily drag and drop onto a page. When the developer drags the representation of the service onto the page, Oracle JDeveloper automatically creates the bindings from the page to the services. At runtime, the ADF Model layer reads the information describing the application's data controls and data bindings from appropriate XML files and implements the two-way connection between the user interface and the application's business service.

A typical MVC application contains the following three layers:

- Model layer that holds the business logic
- View layer that handles the user interface
- Controller layer that manages the interaction between Model and View layers

All the components of the application are loosely coupled. This helps with the

maintenance of the application and increases the reusability.

When you create an ADF Business Components application module, the services that it encapsulates are exposed through ADF Model as data controls, which you can then use to create data bound components on web pages and other user interfaces. For the most common use cases, we can thus create a complete application without writing any Java code.

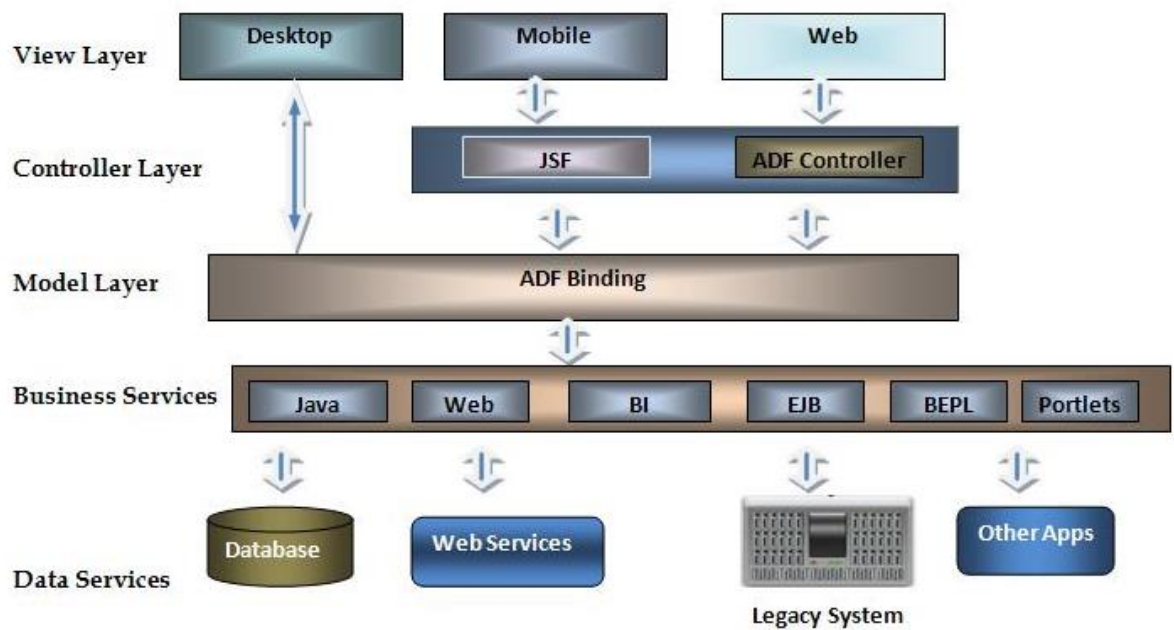


Fig.4.1: Oracle ADF basic architecture diagram

The different layers provide various choices of technology which is flexible and pliant. The view layer supports desktop, mobile and web interfaces. The controller and model layer comes under the ADF framework. The business service layer can be anything such as Java, EJB, Web, etc. And the same flexibility is there for data layer. The application can interact with RDBMS, web service, etc.

The flexibility of Oracle ADF framework makes it very popular in the Java EE application development domain. The architecture of the portal UI is based on the Model-View-Control (MVC) design pattern. The MVC paradigm separates the code that handles business logic from the code that controls presentation and event handling. Each page in the portal is made up of a combination of at least one Model and View, and one or more Controls.

4.2 ADF Benefits:

4.2.1 Visual and Declarative Java EE Development:

A critical aspect of making a development framework useful is having a development tool that simplifies the creation of applications using such a framework. Oracle offers visual and declarative tools for each layer of Oracle ADF. These tools, which are integrated into the JDeveloper IDE and benefits Java developers even if they don't use the runtime features of Oracle ADF.

4.2.2 Business Services Development

Oracle JDeveloper includes a variety of ways to construct business services including: web services, simple Java objects, and ADF BC. "Productivity with Choice" is a cornerstone to this approach. When generating these, it is possible to make use of a wizard-driven approach to generate Business Services that provide Java interfaces to these tables. With simply a right-click these interfaces can then be exposed as web services, including SDO based web services. Additionally, keeping with the theme of being visual and declarative, it is also possible to accomplish the same thing via visual modeling to generate these interfaces.

4.2.3 User Interface Development:

Visual and declarative development features of the View and Controller layers of an application

are plentiful in Oracle JDeveloper:

- ADF Faces - a large set of over a 150 UI components built on top of standard JSF APIs that leverage the latest technologies, including partial page rendering to provide a rich and interactive user interface.
- A page flow modeler for the ADF controller and the standard JSF framework page flow, providing visual page flow modeling using simple drag and drop of components onto a diagram.
- Reusability features- several features for maximizing reusability, including the creation of task flows, ADF Libraries, and declarative components.

AGILE SOFTWARE DEVELOPMENT

There are various agile technologies that are used for the development of the application and for the effective and stable functionalities of the application.

5.1 Agile Software Development:

In February 2001, seventeen software developers met at the Snowbird in Utah to discuss lightweight development methods. Together the seventeen published the manifesto for Agile Software Development through their combined experience of developing software and helping others to do it.

Certain values were set for the effective working of the model including:

- Individuals and Interactions - over processes and tools: Self-organization and motivation are important as interactions like co-location and pair programming.
- Working Software - over comprehensive documentation: Working software is more useful than just presenting documents to clients in meetings.
- Customer Collaboration - over contract negotiation: Requirements cannot be fully collected at the beginning of the software development cycle and continuous customer or stakeholder involvement is very important.
- Responding to Change - over following a plan: Agile software development methods are focused on quick responses to change and continuous development.

5.1.1 Agile Principles:

The Manifesto for Agile Software Development is based on the following twelve principles:

1. Customer satisfaction by early and continuous delivery of valuable software
2. Welcome changing requirements, even in late development
3. Working software is delivered frequently (weeks rather than months)
4. Close, daily cooperation between business people and developers
5. Projects are built around motivated individuals, who should be trusted
6. Face-to-face conversation is the best form of communication (co-location)
7. Working software is the principal measure of progress
8. Sustainable development, able to maintain a constant pace
9. Continuous attention to technical excellence and good design
10. Simplicity—the art of maximizing the amount of work not done—is essential
11. Best architectures, requirements, and designs emerge from self-organizing teams
12. Regularly, the team reflects on how to become more effective, and adjusts accordingly

Most agile development methods break product development work into small increments that minimize the amount of up-front planning and design. Iterations are short time frames (time-box) that typically last from one to four weeks. Each iteration involves a cross-functional team working in all functions: planning, analysis, design, coding, unit testing, and acceptance testing. At the end of the iteration a working product is demonstrated to stakeholders.

An iteration might not add enough functionality to a market release, but the goal is to have an available release (with minimal bugs) at the end of each iteration. Multiple iterations might be required to release a product or new features. Working software is the primary measure of progress.

5.2 Scrum (software development):

Scrum is an iterative and incremental agile software development framework for managing product development. It defines a flexible, holistic product development strategy where a development team works as a unit to reach a common goal, challenges assumptions of the traditional, sequential approach to product development, and enables teams to self-organize by encouraging physical co-location or close online collaboration of all team members, as well as daily face-to-face communication among all team members and disciplines involved.

A key principle of Scrum is the dual recognition that customers will change their minds about what they want or need (often called requirements volatility) and that there will be unpredictable challenges for which a predictive or planned approach is not suited.

Scrum then adopts an evidence based empirical approach accepting that the problem cannot be fully understood or defined up front and instead focusses on how to maximize the team's ability to deliver quickly, to respond to emerging requirements and to adapt to evolving technologies and changes in market conditions.

PROJECT MANAGEMENT

Project management is the discipline of initiating, planning, executing, controlling, and closing the work of a team to achieve specific goals and meet specific success criteria. A project is a temporary endeavor designed to produce a unique product, service or result with a defined beginning and end (usually time-constrained) undertaken to meet unique goals and objectives. It typically brings beneficial change or added value.

The temporary nature of project stands in contrast with business as usual, which are repetitive, permanent, or semi-permanent functional activities to produce products or services.

The primary challenge of project management is to achieve all of the project goals within the given constraints. This information is usually described in a user or project manual, which is created at the beginning of the development process. The primary constraints are scope, time, quality and budget. The secondary and more ambitious challenge is to optimize the allocation of necessary inputs and integrate them to meet pre-defined objectives.

6.1 Traditional Approach:

A traditional phased approach identifies a sequence of steps to be completed. In the traditional approach, five developmental components of a project can be distinguished as:

- initiation
- planning and design
- execution and construction
- monitoring and controlling systems
- completion or closing

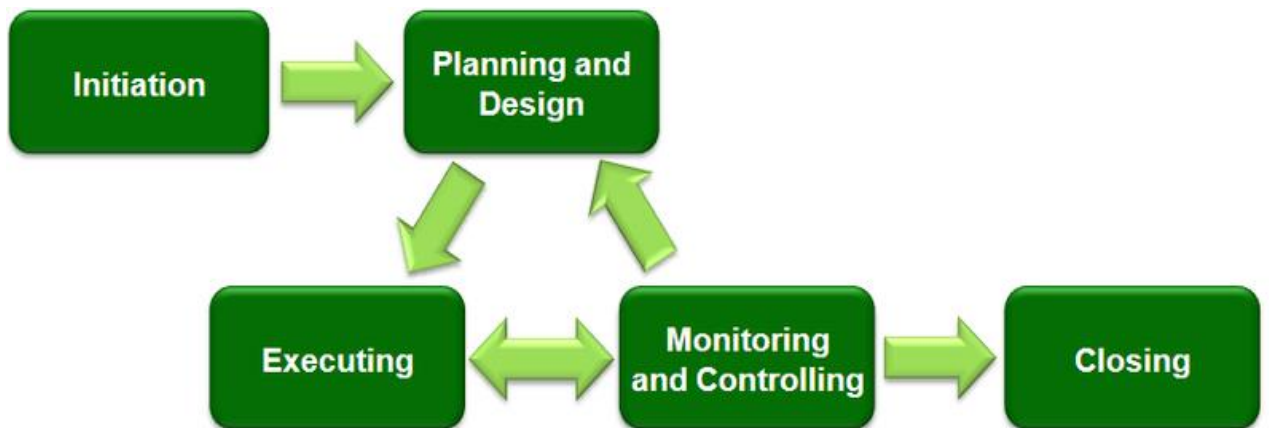


Fig 6.1: Typical development phases of an engineering project

The planning made on the initial phase of the project suffers from a high degree of uncertainty. In projects where requirements have not been finalized and can change, requirements management is used to develop an accurate and complete definition of the behavior of software that can serve as the basis for software development. While the terms may differ from industry to industry, the actual stages typically follow common steps to problem solving:

- Defining the problem
- Weighing options
- Choosing a path
- Implementation and evaluation

ORACLE SQL DEVELOPER

Oracle SQL Developer is the Oracle Database IDE. It is a free graphical user interface which allows database users and administrators to do the tasks in fewer clicks and keystrokes. A productivity tool, SQL Developer's main objective is to help the end user save time and maximize the return on investment in the Oracle Database technology stack. SQL Developer supports Oracle Database 10g, 11g, and 12c and will run on any operating system that supports Java.

SQL Developer provides powerful editors for working with SQL, PL/SQL, Stored Java Procedures, and XML. Run queries, generate execution plans, export data to the desired format (XML, Excel, HTML, PDF, etc.), execute, debug, test, and document your database programs, and much more with SQL Developer.

7.1 SDDM:

Oracle SQL Developer includes a complete data modeling solution with Oracle SQL Developer Data Modeler (SDDM) running inside the application.

SDDM supports:

- Logical, relational, physical, dimensional modeling
- Data Flow Diagrams
- Importing from data dictionaries, DDL scripts, Oracle Repositories
- Versioning of your designs via Subversion
- Comparing models with generation of ALTER scripts
- A powerful search and reporting utility

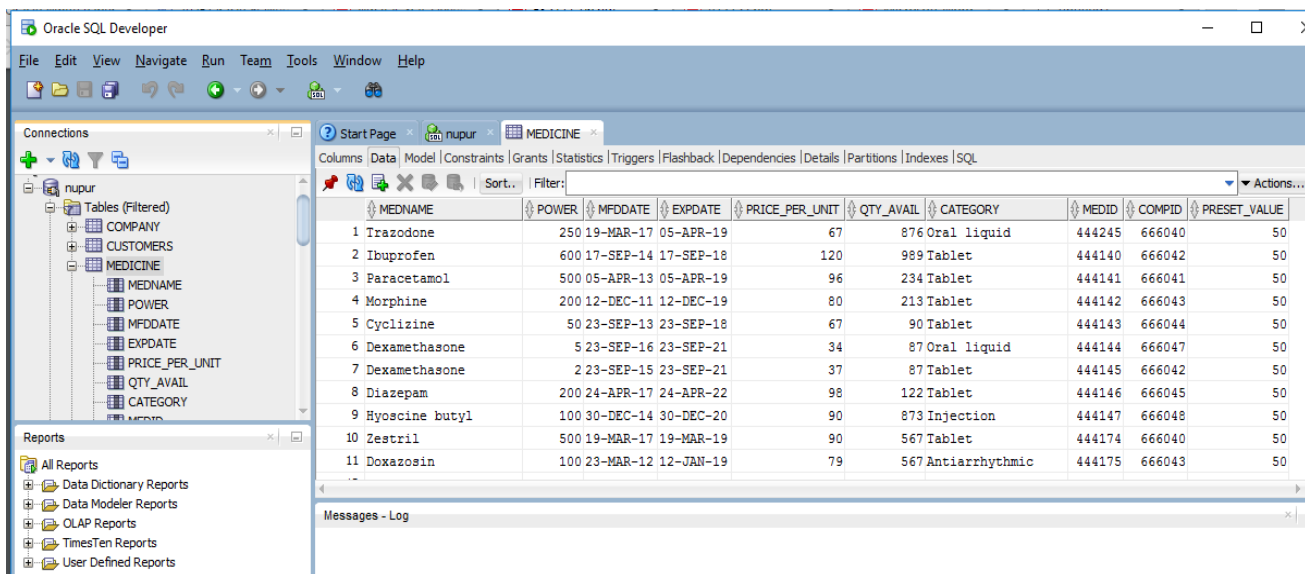
Oracle SQL Developer (sqldeveloper) is an Integrated development environment (IDE) for working with SQL in Oracle databases. Oracle Corporation provides this product for free and it uses the Java Development Kit.

Oracle SQL Developer allows us to administer Oracle Rest Data Services and for creating and altering the RESTful Web services. It integrates and allows us to browse applications

and perform other Application Express activities. With Oracle SQL Developer we can browse, export and import, drop or deploy applications. There is a selection of Application Express reports which can be helpful in creating our own custom reports.

SQL Developer is built using the JDeveloper IDE. This means that the extension API is available to users both within Oracle and externally. It also means that teams or individual users who want a particular piece of functionality, forms a basic spell checker to more complex extensions which can use the API to add to this desired functionality.

Extensions can be as simple as sharing reports across team, or adding context menus or extra tabs, to more complex wizard driven utilities.



The screenshot shows the Oracle SQL Developer interface. The main window displays a table of medicine data. The table has columns for MEDNAME, POWER, MFDDATE, EXPDATE, PRICE_PER_UNIT, QTY_AVAIL, CATEGORY, MEDID, COMPID, and PRESET_VALUE. The data is as follows:

	MEDNAME	POWER	MFDDATE	EXPDATE	PRICE_PER_UNIT	QTY_AVAIL	CATEGORY	MEDID	COMPID	PRESET_VALUE
1	Trazodone	250	19-MAR-17	05-APR-19	67	876	Oral liquid	444245	666040	50
2	Ibuprofen	600	17-SEP-14	17-SEP-18	120	989	Tablet	444140	666042	50
3	Paracetamol	500	05-APR-13	05-APR-19	96	234	Tablet	444141	666041	50
4	Morphine	200	12-DEC-11	12-DEC-19	80	213	Tablet	444142	666043	50
5	Cyclizine	50	23-SEP-13	23-SEP-18	67	90	Tablet	444143	666044	50
6	Dexamethasone	5	23-SEP-16	23-SEP-21	34	87	Oral liquid	444144	666047	50
7	Dexamethasone	2	23-SEP-15	23-SEP-21	37	87	Tablet	444145	666042	50
8	Diazepam	200	24-APR-17	24-APR-22	98	122	Tablet	444146	666045	50
9	Hyoscine butyl	100	30-DEC-14	30-DEC-20	90	873	Injection	444147	666048	50
10	Zestril	500	19-MAR-17	19-MAR-19	90	567	Tablet	444174	666040	50
11	Doxazosin	100	23-MAR-12	12-JAN-19	79	567	Antiarrhythmic	444175	666043	50

Fig. 7.1: SQL Developer Table Data

CHAPTER 8

PERFORMANCE ANALYSIS

Login Page:

The login page of the HealthMart application will be displayed as shown in fig.8.1

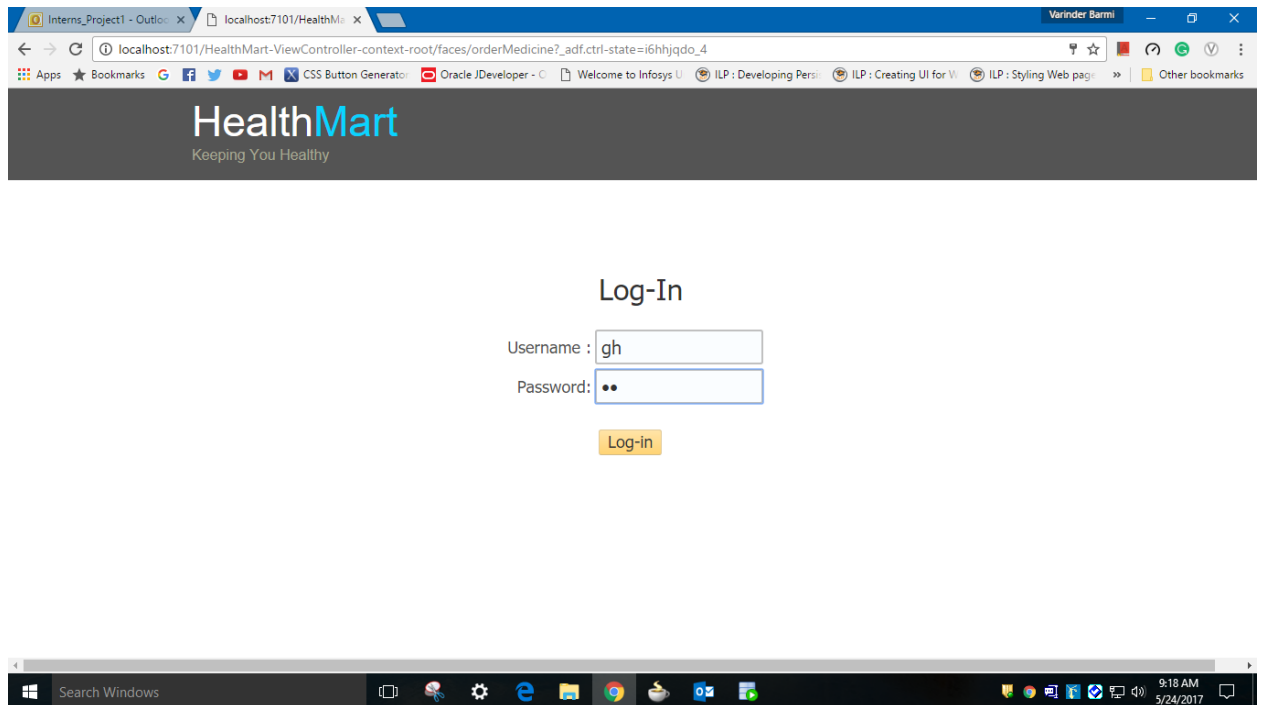


Fig. 8.1: Login page of application

Home page:

The homepage of the application is shown in fig.8.2. After logging in a pop up is displayed of successful login and the below page is opened with About Us, My Account, Add, etc. and other functionalities such as Add customer and Generate bill.

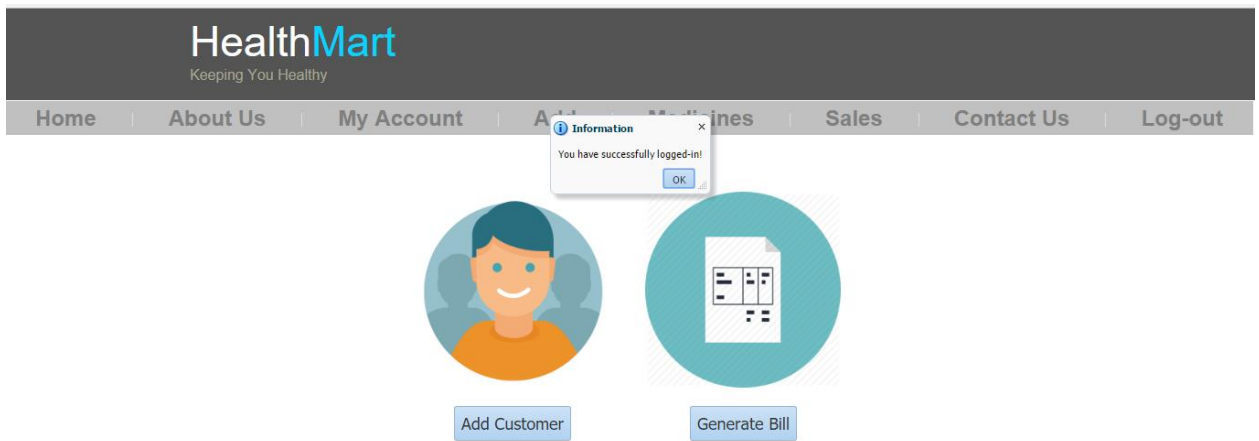


Fig. 8.2: Homepage of application

Add customer tab:

The pharmacist has the rights to add a new customer into the database as provided by the admin. In the add customer tab(Fig.8.3), details regarding customer id, customer name, phone no., address are to be updated for the newly added customer.

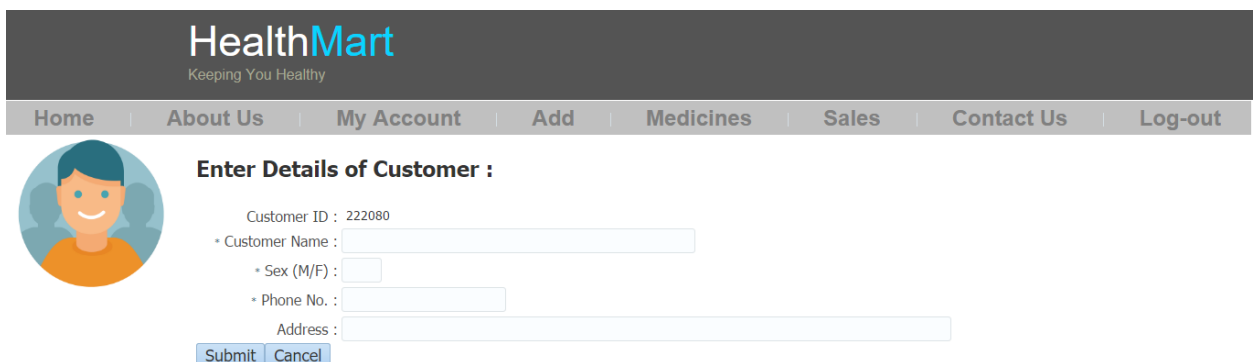


Fig. 8.3: Add customer tab

Generate Bill tab:

The bill generation tab is added as a functionality into the application so that the pharmacist can easily generate bill for the medicines purchased by the customer. Fig.8.4 shows Generate bill tab where bill id is auto generated but customer id is to be entered manually, then after adding quantity the pharmacist can generate bill details for the medicines purchased.

HealthMart
Keeping You Healthy

Home | About Us | My Account | Add | Medicines | Sales | Contact Us | Log-out

Generate Bill :

* Bill ID : 777194
Customer ID : 55354

Medicine ID	Medicine Name	Power	Price per Unit	Quantity Available
444615				
444140	Diazepam	200	98	122
444141	Paracetamol	500	96	234
444142	Morphine	200	80	213
444143	Cyclizine	50	67	90
444144	Dexamethason...	5	34	87
444146	Diazepam	200	98	122
444147	Hyoscine butyl	100	90	873
444174	Zestril	500	90	567
444175	Doxazosin	100	79	567

Enter Quantity :

Quantity :

Generate Bill Cancel

Fig. 8.4: Generate bill tab

About us page:

The about us page been shown in fig.8.5 depicts the information regarding the application, the main motto of HealthMart application and the responsibilities of the pharmacist in managing and creating this application.

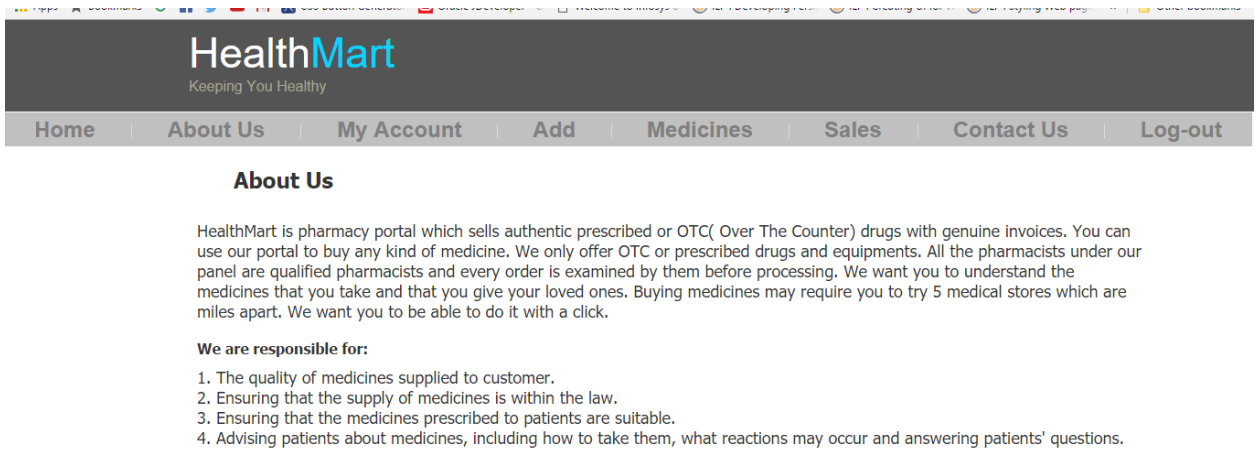


Fig. 8.5: About Us page of application

My Account page:

My account page been shown in fig.8.6 which helps in updating the name, username, password, phone no. and address of the pharmacist so that if changes are to be made, it will be feasible enough for the pharmacist to update them.

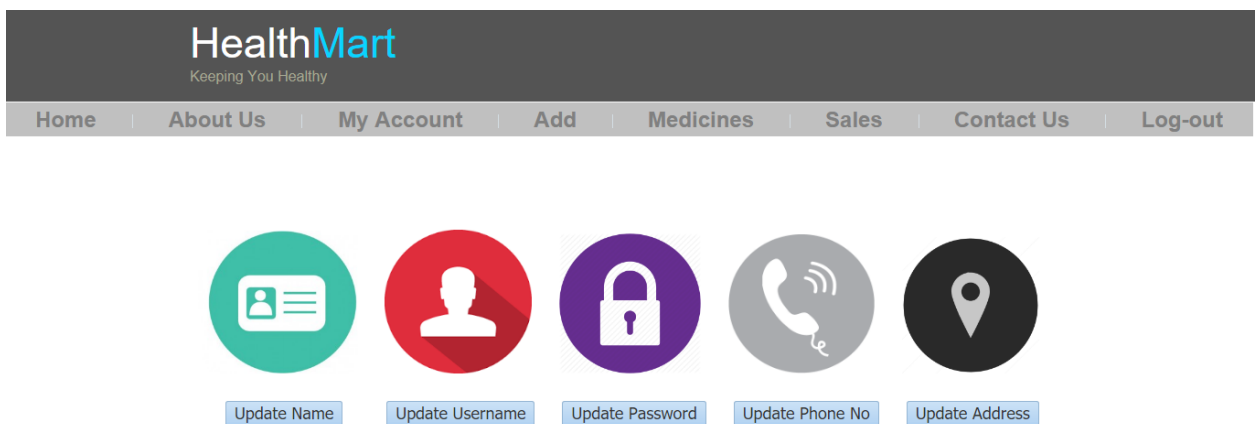
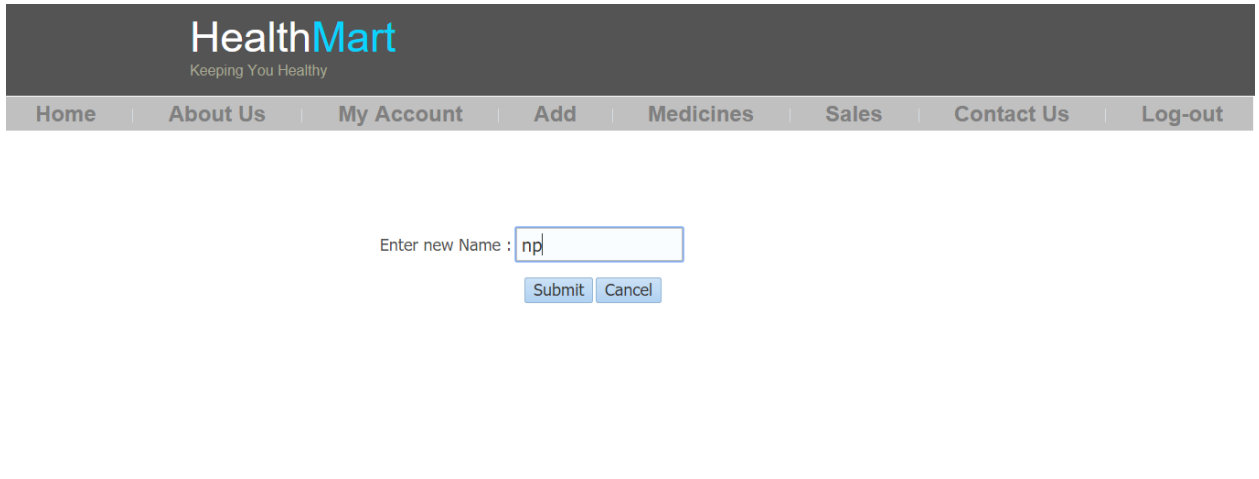


Fig. 8.6: My Account page of application

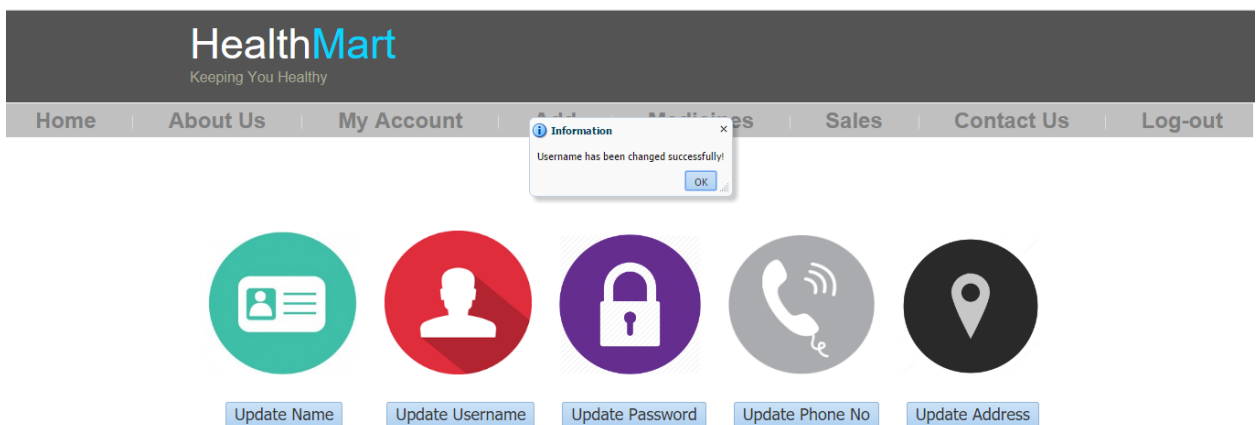
Updating name:

After clicking on the update name tab, pharmacist can update the name and the functionality will work effectively after clicking the submit button for submission(Fig.8.7)



The screenshot shows the HealthMart website header with the logo and tagline 'Keeping You Healthy'. Below the header is a navigation menu with links: Home, About Us, My Account, Add, Medicines, Sales, Contact Us, and Log-out. The main content area displays a form titled 'Enter new Name :'. The form has a text input field containing 'np', a 'Submit' button, and a 'Cancel' button.

Fig. 8.7: Updating name of the pharmacist



The screenshot shows the HealthMart website header and navigation menu. Below the navigation menu, there is a row of five circular icons representing different update functions: 'Update Name' (green circle with a person icon), 'Update Username' (red circle with a person icon), 'Update Password' (purple circle with a padlock icon), 'Update Phone No' (grey circle with a phone icon), and 'Update Address' (black circle with a location pin icon). Below each icon is a corresponding button. A small 'Information' dialog box is open over the 'Update Username' button, displaying the message 'Username has been changed successfully!' and an 'OK' button.

Fig. 8.8: Updating username of the pharmacist

The screenshot displays the Outlook Web App interface. On the left, a navigation pane shows folders like 'Inbox' and 'Sent Items'. The main area is divided into a list of emails and a detailed view of the selected email. The email is from 'Interns_Project1' with the subject 'HealthMart | New Customer Registration'. The body of the email contains the following text:

HealthMart | New Customer Registration

To: Interns_Project1
Tuesday, May 23, 2017 8:32 PM

Health Mart
Keeping You Healthy

#350, Hebbal Electronic City,
Hootagalli,
Mysore, 570027

Subject: New Customer Registration.

Dear Customer,

Congratulations!!! You have been successfully registered with HealthMart.

Thank you for visiting us.

Sincerely,
Manager,
HealthMart

Fig. 8.9: Successful registration of customer

Add tab:

The add tab of the application is used for adding a new medicine or adding a new company name and company details(Fig.8.10).

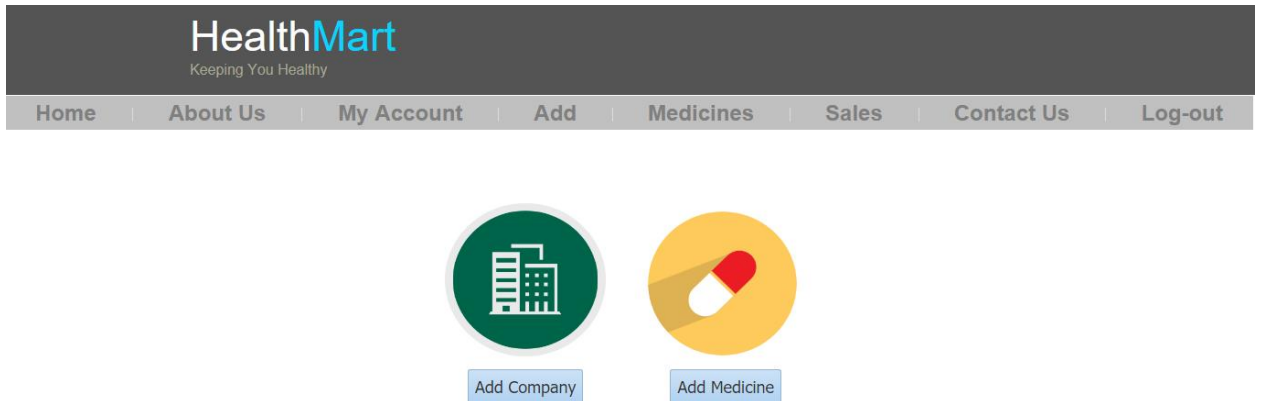


Fig. 8.10: Add tab of the application

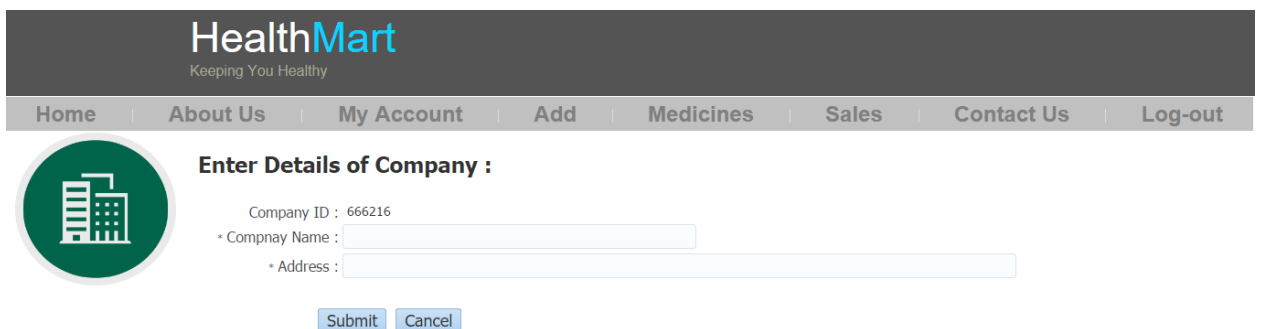




Fig. 8.11: Add company details page

The functionality of add company includes adding company name and address(Fig.8.11)



Home | About Us | My Account | Add | Medicines | Sales | Contact Us | Log-out



Enter Details of Medicine :

Medicine ID : 444615

* Medicine Name :

* Power :

* Manufacturing Date :

* Expiry Date :

* Price per Unit :

* Quantity Available :

Category :


Company ID :

Fig. 8.12: Add medicine details page

The functionality of add medicine includes adding medicine name, power, expiry date, manufacturing date, category, etc.to the medicine table(Fig 8.12).

Medicine Page:

The medicine page gives freedom to edit and update medicine details, expiry medicine and order of medicine(Fig.8.13).



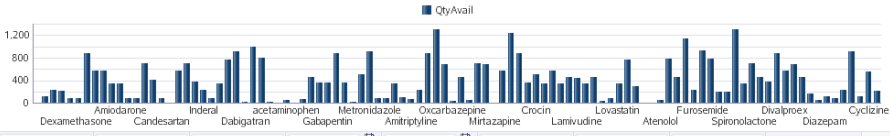
Home | About Us | My Account | Add | Medicines | Sales | Contact Us | Log-out

[Edit Medicine](#)

[Expiring Medicine](#)

[Order Medicine](#)

Medicines available in store :



Medicine ID	Medicine Name	Power	Manufacturing Date	Expiry Date	Price per Unit	Quantity Available	Category	Company ID
444615								
444140	Diazepam	200	4/24/2017	4/24/2022	98	122	Tablet	666045
444141	Paracetamol	500	4/5/2013	4/5/2019	96	234	Tablet	666041
444142	Morphine	200	12/12/2011	12/12/2019	80	213	Tablet	666043
444143	Cyclizine	50	9/23/2013	9/23/2018	67	90	Tablet	666044
444144	Dexamethason...	5	9/23/2016	9/23/2021	34	87	Oral liquid	666047
444146	Diazepam	200	4/24/2017	4/24/2022	98	122	Tablet	666045
444147	Hyoscine butyl	100	12/30/2014	12/30/2020	90	873	Injection	666048

Fig. 8.13: Medicine page

The edit medicine tab allows the user to select a medicine and update its name, expiry date and other attributes(Fig.8.14).

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Select Medicine to Update:

Medicine ID	Medicine Name	Power	Manufacturing Date	Expiry Date	Price per Unit	Quantity Available	Category	Company ID
444615								
444140	Diazepam	200	4/24/2017	4/24/2022	98	122	Tablet	666045
444141	Paracetamol	500	4/5/2013	4/5/2019	96	234	Tablet	666041
444142	Morphine	200	12/12/2011	12/12/2019	80	213	Tablet	666043
444143	Cyclizine	50	9/23/2013	9/23/2018	67	90	Tablet	666044
444144	Dexamethason...	5	9/23/2016	9/23/2021	34	87	Oral liquid	666047
444146	Diazepam	200	4/24/2017	4/24/2022	98	122	Tablet	666045
444147	Hyoscine butyl	100	12/30/2014	12/30/2020	90	873	Injection	666048
444174	Zestril	500	3/19/2017	3/19/2019	90	567	Tablet	666040
444175	Doxazosin	100	3/23/2012	1/12/2019	79	567	Antiarrhythmic	666043
444176	Terazosin	100	3/23/2012	1/12/2019	56	345	Antiarrhythmic	666044
444177	Amiodarone	250	8/2/2016	3/19/2019	55	345	Tablet	666041
444178	Atorvastatin	100	9/17/2014	4/5/2019	83	88	Antihyperlipide...	666045
444179	Pravastatin	250	3/19/2017	10/29/2018	79	88	Tablet	666046
444181	Valsartan	100	8/2/2016	8/23/2020	98	691	Tablet	666040
444182	Irbesartan	500	8/2/2016	3/19/2019	62	398	Injection	666048

Fig. 8.14: Edit medicine tab

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Medicines Expiring with-in next 6 months :

Medid	Medname	Power	Mfddate	Expiry Date	PricePerUnit	QtyAvail	Category	Compid
444197	Rivastigmine	500	1/12/2019	7/7/2017	457	6	Injection	666044
444156	Codeine	30	7/7/2014	7/7/2017	20	100	Tablet	666050
444158	Morphine	10	11/12/2012	11/12/2017	23	213	Oral liquid	666045
444220	Gemfibrozil	500	8/2/2016	7/7/2017	98	39	Oral liquid	666050
444569	Avil	25	5/1/2017	5/25/2017	30	50		

Fig. 8.15: Medicines expiry tab

The expiry medicine tab allows to check and get details of all the medicines which will be expired within next 6 months(Fig.8.15).

Medicine that are less than preset value :

Medicine ID	Medicine Name	Power	Category	Price per Unit	Quantity Available	Company ID	Quantity
444184	Metoprolol Succinate	500	Injection	4000	1	666043	49
444193	Dabigatran	100	Injection	692	23	666042	27
444196	Donepezil	150	Tablet	673	21	666045	29
444197	Rivastigmine	500	Injection	457	6	666044	44
444199	Wellbutrin	250	Capsule	2345	1	666040	49
444148	Metoclopramide	200	Oral liquid	1500	23	666047	27
444165	Oxcarbazepine	1000	Tablet	123	34	666047	16
444167	Butalbital	500	Oral liquid	592	44	666053	6
444170	Mirtazapine	1000	Injection	1100	2	666047	48
444220	Gemfibrozil	500	Oral liquid	98	39	666050	11
444227	Olmesartan	1000	Capsule	2000	2	666047	48
444228	Los/HCTZ	1000	Beta Blocker	2000	4	666047	46
444229	Atenolol	1000	Beta Blocker	79	45	666050	5
444615							

Fig. 8.16: Medicines preset value tab

The preset value tab allows to check for medicines that are less than a preset value and the complete excel sheet can be exported to the system and a mail will be sent in order to complete the functionality(Fig.8.16).

Sales page:

The sales page is displayed with the sale of the particular

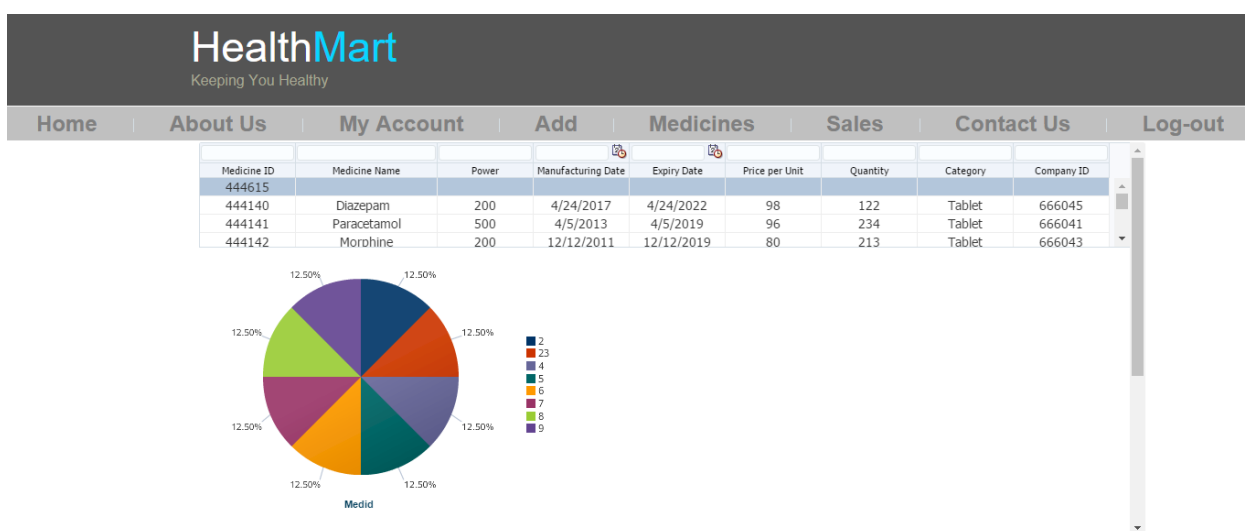


Fig. 8.17: Sales page

Contact Us page:

The contact us page gives the address of the organization and the mobile and email-id where the customer can contact for any queries(Fig.8.13).

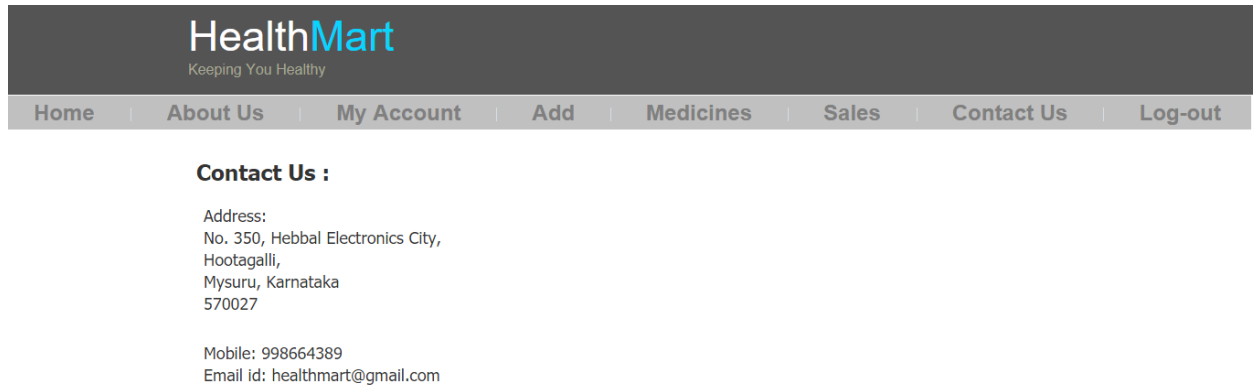
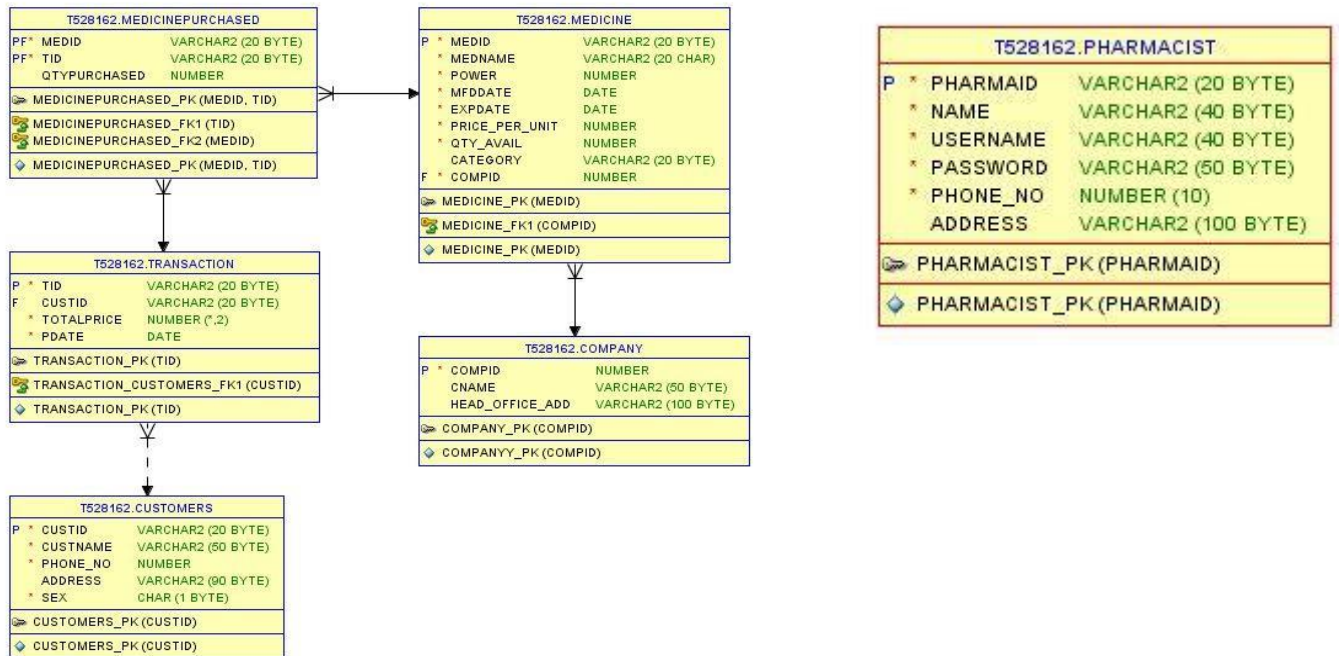


Fig. 8.18: Contact us page

Table Details:

This tables are provided in our project that is HealthMart with there proper relations along with all there attributes.



CONCLUSION

The HealthMart application is developed using the methodologies involving Agile software development and technologies involving ADF and ORACLE SQL. The application is used to keep track of medicines. It provides the functionality to pharmacist to keep details of all the medicines, generate the bills of purchased medicines, will notify him if the quantity of medicines is lower than preset value and also notify him about the expiry date of medicines. The application sends mail to inventory to order medicine below preset value by SMTP and also sends a mail to customer successful confirmation email is sent to customer for the registration and placing the order of medicines by SMTP.

Admin has the functionality to add new pharmacist for medical store. Pharmacist has the functionality to add medicines, customer and medicine company. A bill is generated for the medicine purchased and all the sales are reflected in the database. In this application, whenever a medicine quantity is lower than a predefined preset value an automatic table is generated which contains the details of all these medicines and then the application has functionality to export the information in a documentation and can send a mail to the inventory for the same.5.1) Future scope

On the basis of the analysis of performance of our application we can predict that it will stand by all the requirements and expectations of the user.

Considering the future use and scope of the application, we can say that it will be used by the customers as it is highly user-interactive and easy to operate for managers and Admin of any organization. It accepts almost every city to be source or destination hence easily accessible by the customer.