

SENIOR CITIZEN HELP PORTAL

A PROJECT REPORT

Submitted to Biju Patnaik University of Technology
in partial fulfillment of the requirements for the degree in

Master in Computer Application

by

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(Regd. No:2105206006)

Under the esteemed guidance of

MR. SUMAN SOURAV PRASAD



**AJAY BINAY INSTITUTE OF TECHNOLOGY
CUTTACK**

2023

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TO WHOM IT MAY CONCERN

This is to certify that Ashis Moharana has undergone for the development of a project titled **Senior Citizen Help Portal** with HTML-5, Java Script, CSS and JSP Technology of Java EE with MySQL Server from 2nd February 2023 to 31st May 2023.

As part of the project he designed various user interfaces and reports by understanding the design structure and implementation. During the period of development he showed good design skill with the attitude to learn new things. His performance is satisfactory and was able to complete the assigned task on time.

We wish him all the best for his future endeavours.

For Ashirbad Consultancy

Unit of : Computer Education, Software Development & Data Processing

AJAY BINAY INSTITUTE OF TECHNOLOGY

(An affiliated college of Biju Patnaik University of Technology, Odisha)

CDA, Sector-1, Markat Nagar

Cuttack-753014



This is to certify that the Project entitled **Senior Citizen Help Portal** is a bonafide record of independent work done by Ashis Moharana (Reg. No.: 2105206006) under my supervision during February 2023 to May 2023 at **Ashirbad Consultancy**, submitted to the Department of Computer Applications, **Ajay Binay Institute of Technology, Cuttack, Odisha** in partial fulfillment for the award of the degree of **Master in Computer Application** in session 2021-2023 and that the project has not previously formed the basis for the award of any other degree, Diploma, Associate ship, Fellowship or other title.

Head of the Department
(Mr. Amaresh Sahu)

Internal

External

(Signature)

(Signature)

(Signature)

DECLARATION

I hereby declare that the Project entitled “**Senior Citizen Help Portal**” submitted to the Department of Computer Application, **Ajay Binay Institute of Technology, Cuttack, Odisha** in partial fulfillment for the award of the degree of **Master in Computer Application** in session 2021-2023 is an authentic record of our own work carried out under the guidance of **MR. SUMAN SOURAV PRASAD, Dept. of MCA** and that the Project has not previously formed the basis for the award of any other degree. The report has been prepared in compliance to the guidelines specified by the University.

Ashis Moharana
(Reg. No.: 2105206006)

ACKNOWLEDGEMENT

At every outset I express my gratitude to almighty lord for showering his grace and blessings upon me to complete this project.

Although my name appears on the cover of this book, many people had contributed in some form for development of this project. I might have not success to complete this project without the assistance or support of each of the following well-wishers.

I express my thanks to the Principal of Ajay Binay Institute of Technology Cuttack, Odisha for constant motivation and valuable help throughout the project work.

I also express my gratitude to Prof. Amaresh Sahu, HOD, Dept. of M.C.A, ABIT, for his valuable suggestions and advices throughout the project. I also extend my thanks to other faculties for their cooperation during the project work. Thanks and appreciation to the helpful people at Ashirbad Conculancy for their support.

Finally we would like to thank our friends for their cooperation to complete this project.

ABSTRACT

Title Of The Project : **SENIOR CITIZEN HELP PORTAL**
Client : **HELP AGE Care Center,**
Application Domain : Organisations providing help in the form of
different services for old age people on line.

Functional Requirement:

HELP AGE Care Center is the organization working for the care and concern of disadvantaged older persons. The organization targets to improve the quality of life of older persons by providing services in the form of delivering the day-to-day needs, health care requirements and many others of the older persons. The organization is spending a lot of resource in the form of time and human resource to carry out the operation. The organization i.e. **HELP AGE Care Center** is carrying out the operations manually that leads to a variety of problems and difficulties in the path of providing service.

Therefore a new system felt to be developed at this time for the organization by making the operation online, so that the older persons can make their requests online without moving out of their homes.

Problem Definition:

01. Managing order of services over telephone call through manual method is time consuming and most often becomes tedious.
02. Handling surmountable calls for different products using manual method is too tedious and time taking.
03. Tracking the services given to the older people using manual process is time consuming.

Objective of the System

The objective of the new system is to develop a process to automate the functionalities of the organization with an aim to solve the above problems. The new system is committed strengthening the service process for the older persons .

Project Category – Web Application Using Java EE and MySQL-Server.

Software Requirements.

Server side Language:– JSP (Java EE)

Scripting Language :- HTML, Java Script,CSS.

Databases :- MySQL-Server

Operating System :- Windows-10

Web Server :- Tomcat Apache

Hardware Specifications

The implementation of the proposed system requires the following hardware specifications.

- a. CPU Type : Any Pentium based systems.
- b. CPU Clock : 1 GHz or above
- c. RAM : 2 GB or above
- d. Disk Space : 1 GB or above

REQUIREMENT SPECIFICATION

The proposed project can be divided into two levels of authorization :

1. Admin User Level
2. General User level

In order to implement the system, the following modules are developed :

- i. Organisation Information
- ii. Company Master
- iii. Product Category Master
- iv. Product Master
- v. Service Master
- vi. General Service Information
- vii. Health Care Center Master
- viii. Doctors Information
- ix. City / District Information
- x. Delivery Personnel Information

The new system i.e. **Senior Citizen Help Portal** targets to capture the above information using user friendly input forms and generate different summary and detailed reports based on the query input in search operation by the user.

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CHAPTER : 01

INTRODUCTION

HELP AGE Care Center is the organization working for the care and concern of disadvantaged older persons. The organization targets to improve the quality of life of older persons by providing services in the form of delivering the day-to-day needs, health care requirements and many others of the older persons. The organization is spending a lot of resource in the form of time and human resource to carry out the operation. The organization i.e. **HELP AGE Care Center** is carrying out the operations manually that leads to a variety of problems and difficulties in the path of providing service.

OBJECTIVE & SCOPE

The organization i.e. **HELP AGE Care Center** is carrying out the operations of providing services to the senior citizens manually that needs a unsurmountable time and human resource but that leads to a variety of problems and difficulties in the path of providing service.

Therefore the new system i.e. Senior Citizen Help Portal targets to overcome the difficulties with an objective to provide a faster, efficient and quality service to the senior citizens or old age persons.

THEORITICAL BACKGROUND:

HELP AGE Care Center is the organization working for the care and concern of disadvantaged older persons. The organization targets to improve the quality of life of older persons by providing services in the form of delivering the day-to-day needs, health care requirements and many others of the older persons. The organization is spending a lot of resource in the form of time and human resource to carry out the operation. The organization i.e. HELP AGE Care Center is carrying out the operations manually that leads to a variety of problems and difficulties in the path of providing service.

Therefore a new system felt to be developed at this time for the organization by making the operation online, so that the older persons can make their requests online without moving out of their homes.

DEFINITION OF PROBLEM:

The organization i.e. HELP AGE Care Center is carrying out the operations manually that leads to a variety of problems and difficulties in the path of providing service. The following problem areas are found:

01. Managing order of services over telephone call through manual method is time consuming and most often becomes incorrect.
02. Handling surmountable calls for different products using manual method is too tedious and time taking.
03. Tracking the services given to the older people using manual process is time consuming.

CHAPTER : 03

SYSTEM ANALYSIS AND DESIGN

Here requirements for both the system and the software are documented and reviewed with the customer as well as companies. More focus is given on the software. The analyst interacts and understands the different functionalities, performance of the software. During the design phase requirements are translated into a representation of the software that can be coded. Here focus is given on the different attributes of a program – Data structures, Software Architecture, interface representation and Algorithm details. The design is documented. Then a SRS – System Requirement Specification report is prepared and given to the company.

Systems analysis is an important phase of the System Development Life Cycle. Hence we thoroughly observed the existing system, learn about their problems, define customer's\company's needs & requirements and evaluated some alternative solution.

IDENTIFICATION OF NEED

After collecting sufficient data to understand how the existing system operates, a proper study should be made to identify what is the need of the system to develop. The requirement analysis helps organization to improve the system when implemented. These requirements are determined by properly studying the current performance of the system.

Because the current system is manual based on paper work, so a lot of time is consumed to retrieve required information. After investigating the system we may determine that it may chance of wrong information retrieved. The cost is more in the present system and if any error is occurred in the present system, the proper step or proper procedure is not maintained to eliminate those errors.

After investigating & studying the current system it is found the need to develop a software that will help the organization to maintain the work properly and which will help them in following areas.

- Better accuracy
- Faster retrieval of information
- Greater speed of retrieval of information
- Systematic procedure to eliminate errors.

- Larger capacity of holding data
- Reduced cost
- Generation of reports, which help the management in decision-making.
- The system is maintained with less manpower resources.
- Because the database is maintained so high security is present in system.
- Keep track of high volume of data & information.
- Acquire, consolidation, store, retrieve, distribute and use of data
- Introduce of modern technology
- Ensure optimum level of performance and productivity
- Ensure good quality of service
- Reduce clerical work and avoid duplicacy of data
- Make readily available accurate information for various level of management for analysis and decision making.

PRELIMINARY INVESTIGATION

Preliminary Investigation of our system included collection of user needs, defining all such areas to be computerized & suggesting some feasible solution towards fulfillment of user requests. In our preliminary investigation we discussed much details of the functional parts and the daily business activities of the client. We communicated with the concerned persons & noted their requirements. In our initial observations we found the following areas that needed to be computerized.

Getting the inventory of any particular company or product through manual method is time consuming and some times becomes incorrect. Getting the statistics of receipt of item of any particular company or as a whole is difficult. getting the statistics of issue of item of any particular dealer or as a whole is difficult. Getting the ageing of different dealer and products is difficult. To keep the track of accounts details of different dealers and retailers .To keep the track of account details of companies the company deals with .

While investigating the existing system, we found a lot of activities that needed to be computerized / automated. All the paper work carried while investigating, showed the complications and size of the project. Our very next step was to individualize their requirements and put them into categories or groups. These categories / groups represented a department or an activity or a set of activities that needed to be automated.

FEASIBILITY STUDY

The project to be designed is actually beneficial or not from various angles is examined here. For example if there are no technical persons to operate the project, whether the development cost exceeds the budget allocated by the company, whether there are system resources available or not to implement the solution. For all such reasons a Feasibility study is performed to determination weather or not the enterprise software solution is worth doing. The process followed in making this documentation is called a feasibility study. Project specifications can only be finalized if analysis confirms positive results from feasibility study. Thus since the feasibility study may lead to the conferment of large resources, it become necessary that it should be conducted completely and that no fundamental errors of judgments are made. In a quest to justify our systems requirements specifications, we carried the following types of feasibility studies.

Technical Feasibility:

Technical Feasibility is defined as the availability of suitable technology and system resources to support the enterprise software solution and adequate expertise to develop the solution. Also it must be possible to implement the solution within a reasonable time. The Client has already well-equipped systems. The existing PC's comprised of efficient processors, with appropriate size of RAM and Hard disk as well as printers. All these available hardware met the hardware requirements of our proposed system. We were also provided with most of the software required.

Economic Feasibility:

Economic Feasibility Analysis is the most frequently used technique for evaluating the effectiveness of a proposed system. It is more commonly known as COST / BENEFIT Analysis; the procedure to determine the benefits and savings that are expected from a proposed system and compare them with costs. If benefits outweigh costs, decision is taken to design and implement the system. Otherwise, further justification or alternative in the proposed system will have to be made if it is to have a chance of being approved. This is an ongoing effort that improves in accuracy at each phase of the system life cycle. The existing system had every thing except the network between the individual stand-alone

systems. The expenses needed to establish the network would be worth spending, as it would in all means benefit the overall functioning of the organization.

Operational Feasibility:

Operational Feasibility is defined as the suitability of the solution from the standpoint of the people who will have to use that solution. In context of our proposed system we covered the following issues under operational feasibility

CHAPTER : 04

SYSTEM PLANNING :

The system plan is a product of software design. The system plan specifies the objectives of design process, testing, test completion criteria, system Integration Planed, methods to be used on modules and particular test cases to be used.

What changes will be brought with the system?

The proposed system is targeted towards faster and secured data processing. Large sets of records maintained manually and stored in files and folders would be replaced by convenient and secured way of processing. Not only the proposed project will benefit the existing system, but also it will make the system robust with higher degree of overall performance and productivity.

What Organizational Structures are disturbed?

Basically there is least or approximately nil disturbances, needed to be brought about in the existing organizational structure, for our proposed project to be fully operational.

Do we posses the technical expertise and is the schedule reasonable?

The technical persons available at the client site are well versed with general-purpose software available. There would be less training effort required for the technical staff to operate on our proposed system. Hence, little time would be wasted (after the implementation & testing), for our project to be fully operational.

Software Requirement Specification

Taking all the factors and alternatives proposed by our team into considerations the management decided to computerized the existing “Senior Citizen Help Portal”. The system, is to be designed using Java EE with MsSQL-Server as the repository to provide persistence. The particular selection of language and backend is with a target to develop a robust application.

CHAPTER : 05

SOFTWARE ENGINEERING PARADIGM APPLIED

Software process model is a road map or framework for the tasks that are required to build high-quality software. Thus we can define this as the foundation for Software Engineering. The software process defines a systematic disciplined quantifiable approach to the development, operations and maintenance of the software. The key process areas form the basis for management control of software projects and establish the context in which technical methods are applied, work products (modules, documents, data, reports, forms etc.) are produced, milestones are established, quality is ensured, and changes are properly managed.

As selection of a software process depends mostly on the problem domain or the type and size of the Project, it became a real tough task for us to select a particular path / process out of a range of software processes/modules available. In our Project, we had a range of tasks and a varied set of objectives that spread over different domains of the system.

Initially considering the size of the project and information availability we were inclined to adopt RAD – Rapid Application Development Model, as it would have helped in obtaining prototypes in increments. But as we started dividing the whole project into modules and tasks, we learnt that using prototyping model (as Software Engineering Paradigm) would be more complicating & time consuming. The reason behind it was the size of modules, which would have consumed a lot more time using prototype model than other models.

The software design principle followed here is RAD Rapid Application Development model with short development cycle. As the requirements are well understood and project scope is constrained the RAD process enables a development team to create a fully functional system within very short time period. The requirements gathering process is intensified and focused specifically on software to understand the nature of the programs to be built. The software engineer must understand the information domain for the software, as well as required function; behavior performance and interfacing for both systems and software are documented and reviewed with the customer.

This system view is essential when software must interface with other documents such as hardware, people & database. System engineering and analysis encompasses requirements gathering at the system level with a small amount of top level of analysis business level and at the business area level. The Phases of RAD models are:

1. Business Modeling:

The information and data flows among different business entities i.e. the different modules of the application are modeled here. Also the business functions are identified and the processes that are required to implement the business functions are defined. All the inputs, outputs and information flow among different entities are also identified.

2. Data Modeling:

The various data objects required to support the information flow among different models are modeled here. The relationships between data objects are also defined. Different levels of data flow diagrams are designed

3. Process Modeling:

The entire data objects models were transferred to achieve the information flow. The different process required, for adding, modifying, deleting or retrieving to or from a data object is defined. The relationships between the data objects are also defined. Input and Output data objects are the indication for the application of process model to implement RAD.

4. Application Generation:

Here the actual coding of the business functionalities are designed by using fourth generation techniques. To reuse existing programs, reuse components may also be created. We have selected as per the client requirements Java EE with MsSQL-Server.

5. Testing:

As in RAD, more emphasis is given on the reuse of components, many of the program components have already been tested which reduces the overall testing time. All other components and their interfaced are tested.

MERITS OF ADOPTED METHODOLOGY USING JAVA-EE

Client Server Architecture

Client-server computing or networking is a distributed application architecture that partitions tasks or work loads between service providers (servers) and service requesters, called clients. Clients initiate communication sessions with servers which await (listen to) incoming requests.

Client-server describes the relationship between two computer programs in which one program, the client program, makes a service request to another, the server program. Standard networked functions such as email exchange, web access and database access, are based on the client-server model.

Specific types of clients software include web browsers. Specific types of servers include web servers, ftp servers, application servers, database servers, mail servers, file servers, print servers, and terminal servers.

Any network-based software system that uses client software to request a specific service, and corresponding server software to provide the service from another computer on the network.

The architecture of an application can be divided into following types:-

- (1) 2-Tier Architecture
- (2) 3-Tier Architecture
- (3) N-Tier Architecture
- (4) Enterprise Architecture

2-Tier Architecture

This approach makes a separation between application layer or application logic and data layer. In the below fig. the 1st layer is known as application layer. This results in the structure shown in figure 2:

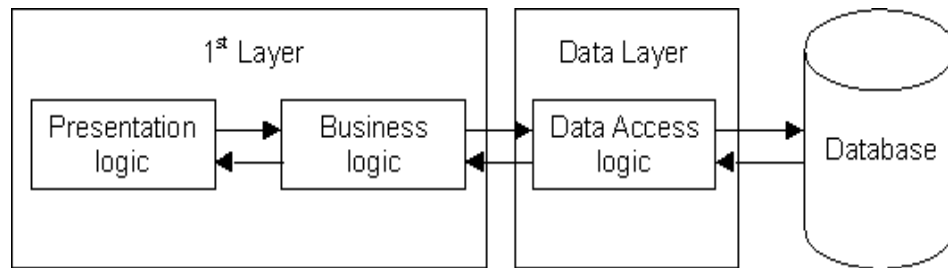


Figure2, The 2-Tier Architecture

The advantage with this architecture is that, because of two separation data can be stored on a single host and can be shared by multiple application, i.e. the resource sharing becomes more efficient. This also removes all the complexities of communicating with the database to a separate layer.

The disadvantage with the 2-Tier architecture is its maintainability because, each client point holds the complete application and the interface together, therefore even a single change in the application needs to be updated at each client architecture.

3-Tier Architecture

This architecture overcomes the limitations of a 2-Tier system. Under this architecture, the application is separated into three different layers with a set of well defined interfaces. This should then enable components in one layer to be modified without requiring changes any changes to components in other layers. For example, changing the file system from one DBMS to another, or changing the user interface from one system to another (e.g. from client/server to the web).

Under this architecture the application broken into following:-

- Presentation/User Interface Layer
- Application/Business Layer
- Data Layer

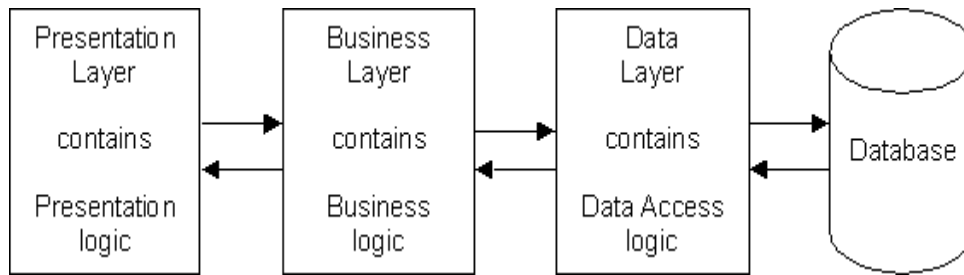


Figure 3, The 3-Tier Structure

The Presentation Layer holds the user interface for interaction with the application.

The middle layer i.e. the business layer holds the application logic i.e. basically the code called by the user through presentation layer to retrieve the desired data.

The Data Layer holds the data to be implemented by the application/business layer. The source of data may be SQL Server, Oracle, Sybase or XML documents.

The main advantage of this structure over the 2-Tier system is that all business logic is contained in its own layer and is shared by many components in the presentation layer. Any changes to business rules can therefore be made in one place and be instantly available throughout the whole application.

N-Tier Architecture

The name implies a structure which contains 'N' number of tiers where 'N' is a variable number. This is usually achieved by taking a component in one of the standard layers of the 3-Tier structure and breaking it down into subcomponents, each performing a specific low-level task.

More specifically under N-Tier architecture, the middle layer containing the application logic is functionally divided into multiple components, each one carrying a particular operation.

For example, the designers of a project have broken down each of the initial three layers into something which resembles the structure shown in figure 4:

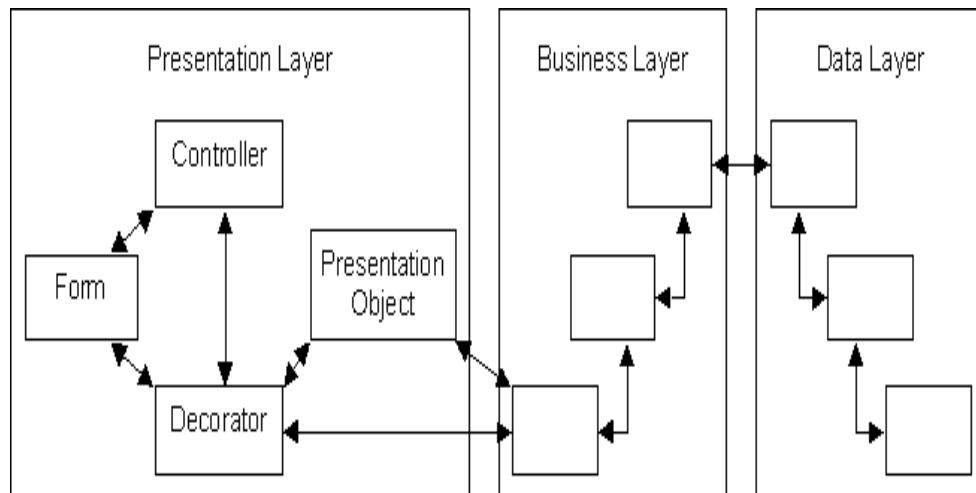


Figure 4 - Splitting 3 layers into 'N' layers

Enterprise Architecture

This architecture is an N-Tier architecture, but the enterprise architecture is capable to manage multiple application types whereas N-Tier is capable to deal with one application only. The application under this architecture can handle applications of different architectures.

Advantages

- In most cases, client-server architecture enables the roles and responsibilities of a computing system to be distributed among several independent computers that are known to each other only through a network. This creates an additional advantage to this architecture: greater ease of maintenance.
- All the data is stored on the servers, which generally have far greater security controls than most clients. Servers can better control access and resources, to guarantee that only those clients with the appropriate permissions may access and change data.

- Since data storage is centralized, updates to that data are easier to administer.
- It functions with multiple different clients of different capabilities.

Enterprise architecture based applications are supported by J2EE. J2EE support enterprise based applications and the implementation is carried out by the following components.

1. Extended JDBC.
2. Servlet
3. JSPs (Java Server Pages).
4. RMI (Remote Method Invocation)
5. EJBs (Enterprise Java Beans)
6. JNDI (Java Network Directory Interface) .
7. JMS (Java Message Service)
8. JM (Java Mail)
9. JTA (Java Transaction API's)

J2EE Architecture:

The management of distributed applications is carried out by a set of components that forms the architecture of J2EE. The major components are the following.

1. Container:

A container is a runtime environment that contains and coordinates the distributed applications. The common containers are the following.

- Web Container
- EJB Container
- Applet Container

The web container contains and coordinate the management of web resources such as servlets and jsp. These containers are also known as servlets and JSP engines.

The EJB container coordinates the managements of EJB components. An EJB component is a reusable enterprise component to be implemented by enterprise applications.

An applet container manages the applets and the application client container carries out the management of standard application client.

2.Server:

A server is the component where the application is deployed and these components carries out the management of request response activities. The servers can be divided into two types.

- Web Server
- Application Server

Web servers are the servers to manage web resources such as HTML, DHTML, Servlets, JSPs etc. the common web servers are

- Java Web Server
- Tomcat Apache
- O'reilley server.

The application servers are the serves to manage the components such as html, dhtml, servlets, jsp and additionally the components such as EJBs, JMS, JM etc.

The common application servers are

- J2EE Server
- Web Logic
- Web Spare
- Pramati

3. Communication Technology:

The communication in a distributed application is carriedout by using the communication technology, such as a set of protocols. The protocols may be

- i. HTTP
- ii. FTP
- iii. TCP/IP
- iv. SSL
- v. UDP

Out of these protocols the most common one is http. It is a simple stateless protocols and defines a set of methods for request response communication. http specifies a set of methods to carryout request response activities. These methods are GET, POST, HEAD, PUT, OPTION, DELETE etc.

The GET method is to carry request transmission of simple resources such as text and images.

The POST method is to carryout request response activities relating to complex information and binary information type. POST method which capable to transmit large bulk of information.

Design of Web Application:

A web application is made up of a no of components such as html, xml, .java, .jar, .jpg, .jpeg etc. the lifecycle of a web application passes through the following phases.

- i. Loading
- ii. Initialising
- iii. Servicing
- iv. Destroying

Lifecycle of Web Application

The lifecycle of J2EE is under the control of container. The container takes the responsibility of the management of the lifecycle of the web application. The phases that the lifecycle passes through are the following.

- 1. Loading
- 2. Instantiation
- 3. Initialization
- 4. Service
- 5. Destroy
- 6. Unavailable

During the loading phase the files that constitute the web application are loaded to the appropriate directory system of the web server.

During the instantiation phase an instance of the web application such as a servlet is created by the web container. The web container create an instance of a servlet as the response to the incoming request from the user or the instance is created at the startup of the container.

Once the instantiation is over, the initialization begins. It is carried out by the container by invoking `init()`. After initialization the servlet components is ready to serve the incoming request. During initialization the servlet instance is initialized by the required parameters. During this phase it may through `ServletException` or an `UnavailableException`.

After initialization the service method begins. The container guarantees that before service phase the `init()` is completed. The service phase is implemented by `service()`. The method in turn may invoke `doGet()` or `doPost()`.

During the destroy phase the particular servlet instance releases the resources occupied by the servlet. This phase is implemented by `destroy()`. During this phase the web container guarantees that the `destroy()` is called before the servlet is destroyed.

Under the unavailable phase the requested servlet doesn't exist and `UnavailableException` is resulted against the request.

SYSTEM IMPLEMENTATION :

System implementation is the final phase in the SDLC, during which the system is actually built or purchased. This is the phase that usually gets the most attention, because for most systems it is the longest and most expensive single part of the development process. This phase has three steps:

- 1. System construction :** The system is built and tested to ensure that it performs as designed. Since the cost of fixing bugs can be immense, testing is one of the most critical steps in implementation. Most organizations spend more time and attention on testing than on writing the programs in the first place.
- 2. The system is installed.** Installation is the process by which the old system is turned off and the new one is turned on. There are several approaches that may be used to convert from the old to the new system. One of the most important aspects of conversion is the training plan, used to teach users how to use the new system and help manage the changes caused by the new system.
- 3. The analyst team establishes a support plan for the system.** This plan usually includes a formal or informal post-implementation review, as well as a systematic way for identifying major and minor changes needed for the system.

SYSTEM MAINTENANCE & EVALUATION:

System maintenance is the process of refining the system to make sure it continues to meet business needs. Over a system's lifetime, more money and effort are devoted to system maintenance than to the initial development of the system, simply because a system continues to change and evolve as it is used. Changes can be small or large. Change requests that are likely to require a significant effort are typically handled.

Cost Benefit Analysis :

Cost / Benefit Analysis is the procedure to determine the benefits and savings that are expected from a proposed system and compare them with costs. If benefits outweigh costs, decision is taken to design and implement the system. Otherwise, further justification or alternative in the proposed system will have to be made if it is to have a chance of being approved. This is an ongoing effort that improves in accuracy at each phase of the system life cycle. The existing system had every thing except the network between the individual stand-alone systems. The expenses needed to establish the network would be worth spending, as it would in all means benefit the overall functioning of the organization.

CHAPTER : 08

SYSTEM REQUIREMENT SPECIFICATION

MODULE DETAILS :

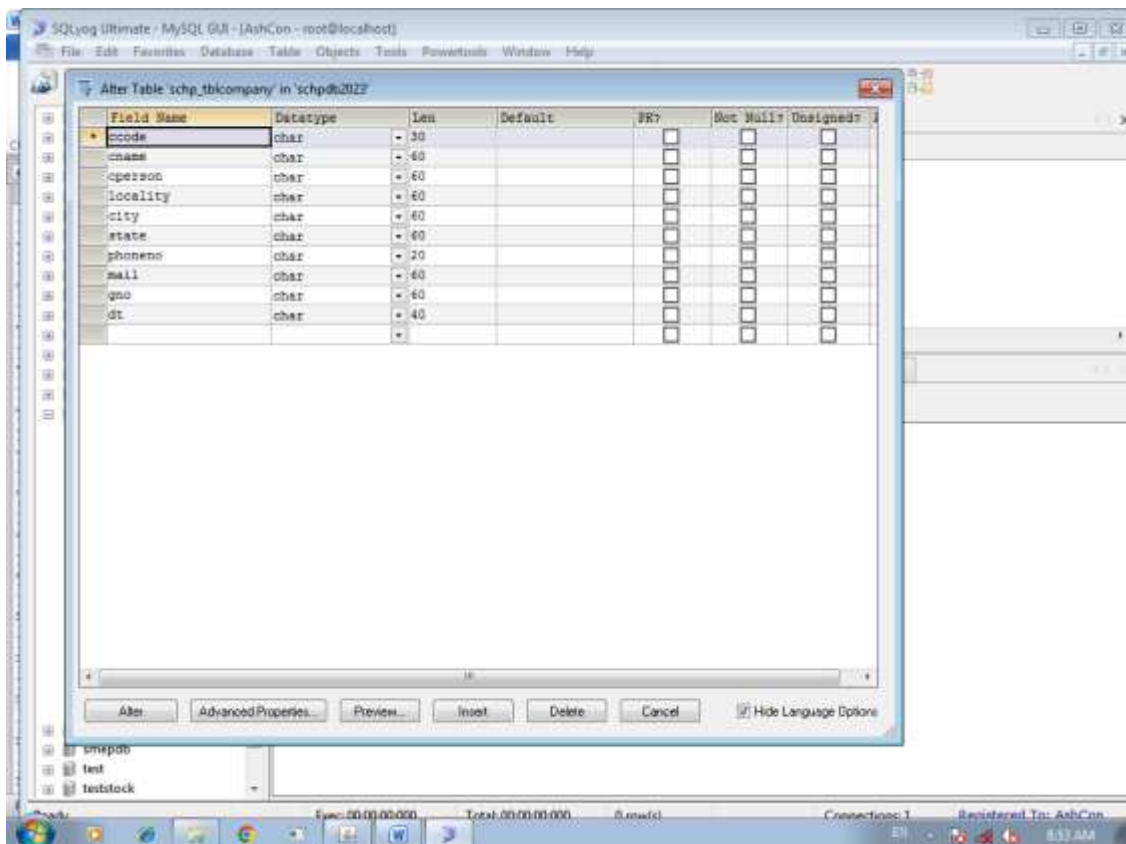
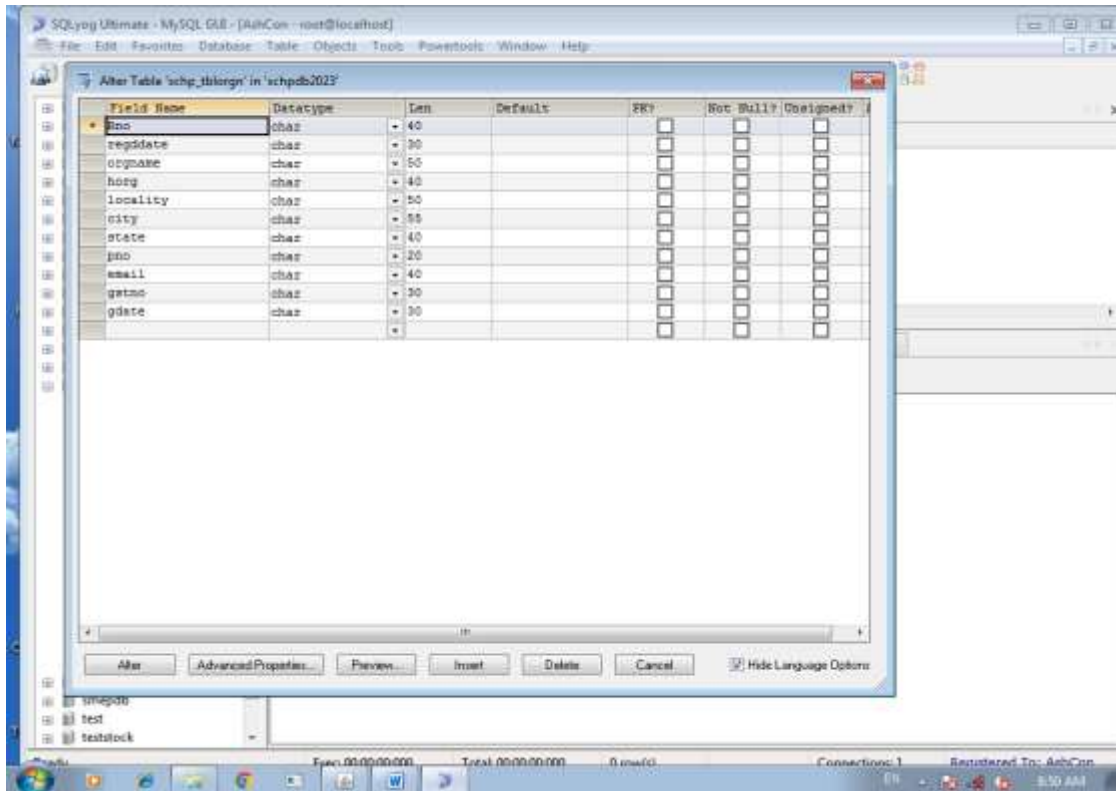
The proposed project can be divided into following modules with authentication and authorization at two levels :

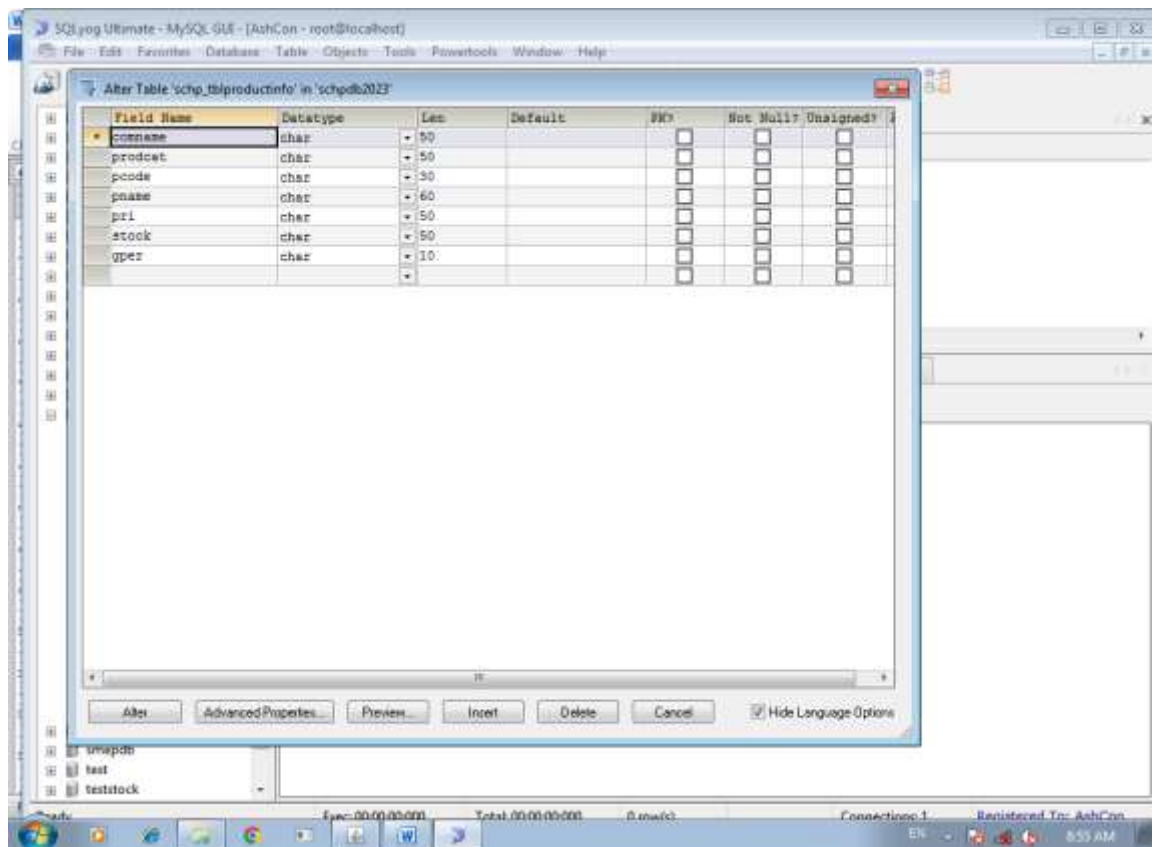
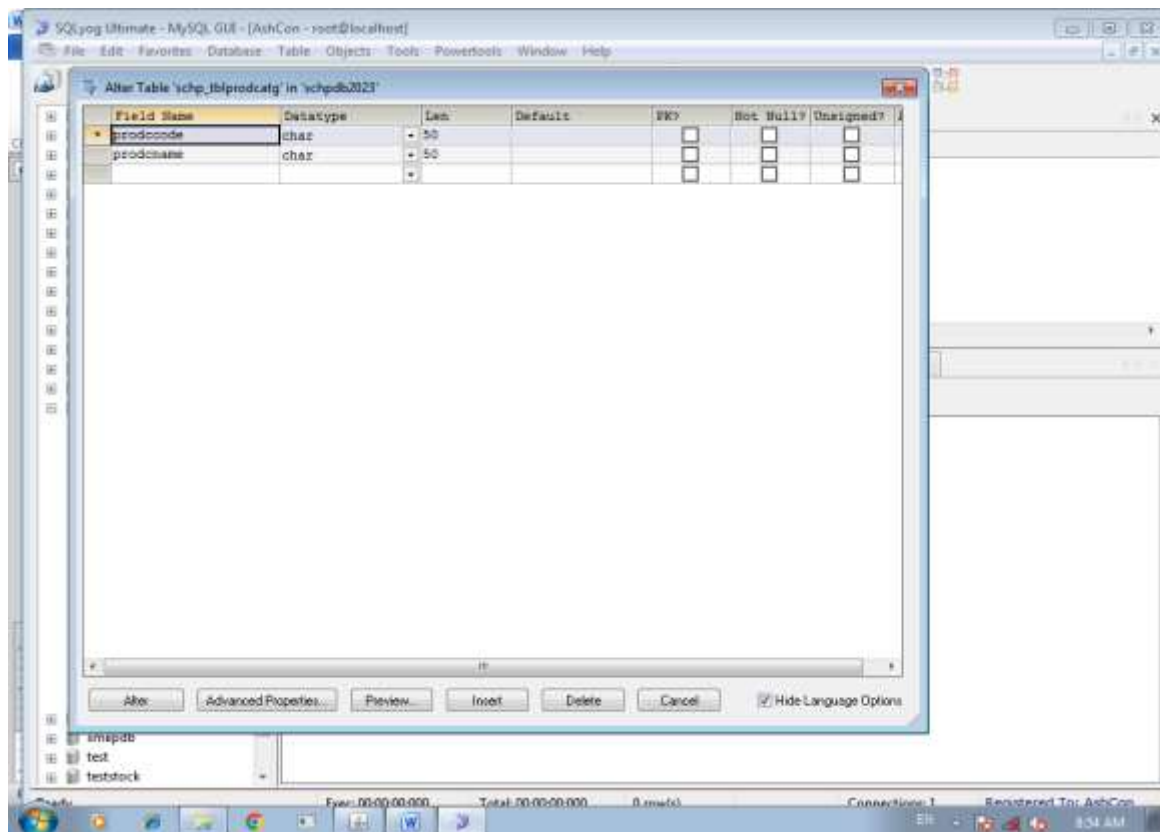
01. Admin User Level
02. General User level

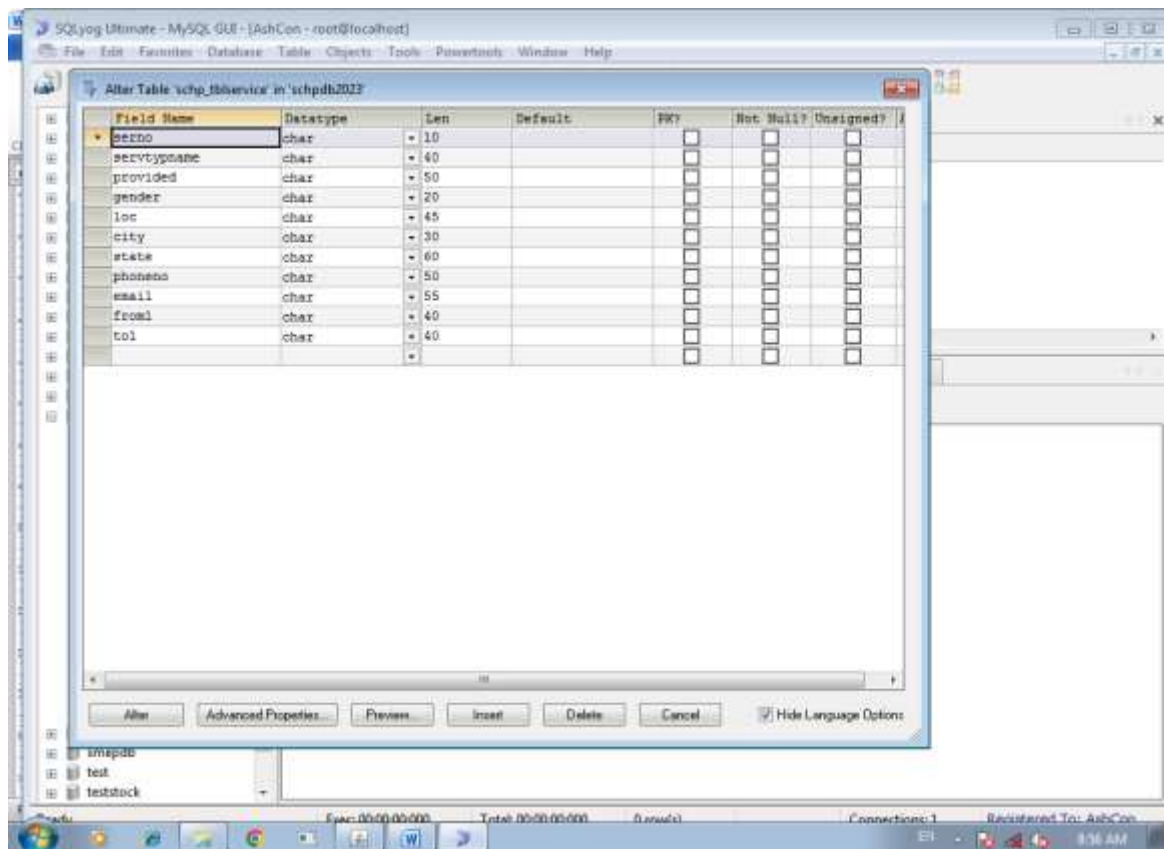
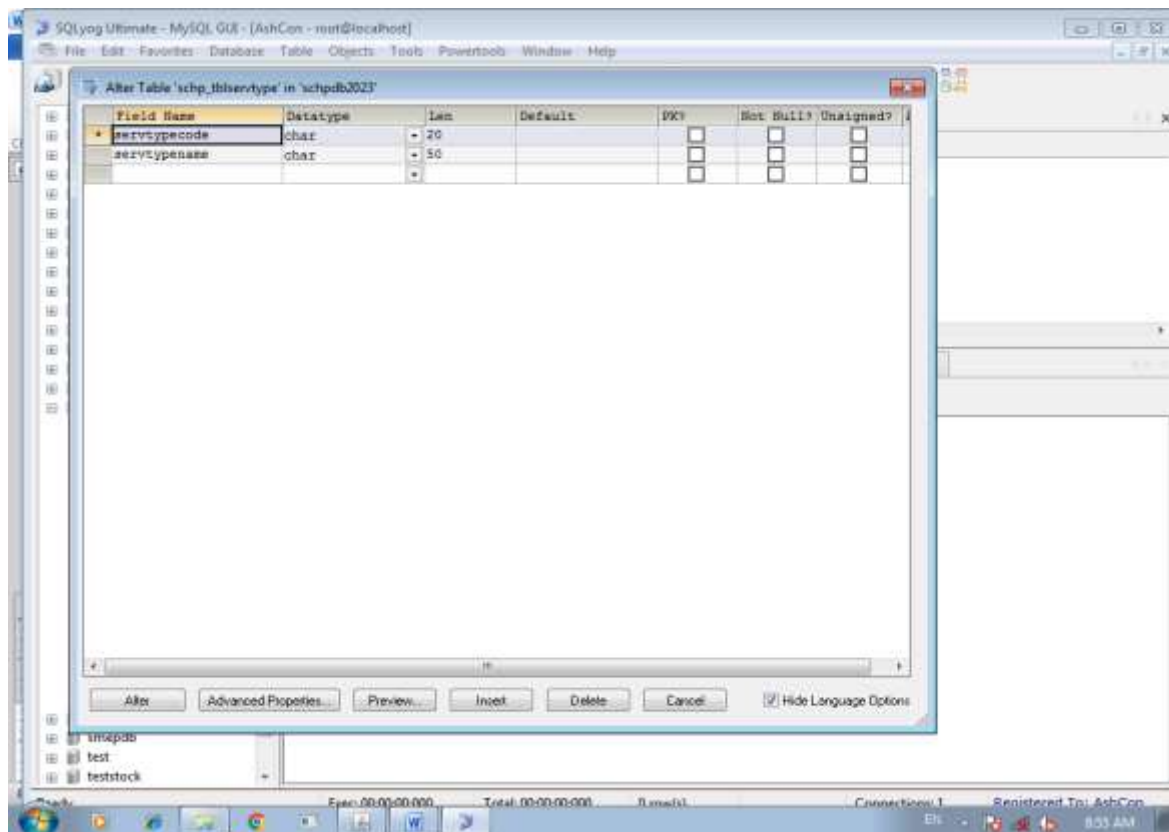
In order to implement the system, the following modules are developed :

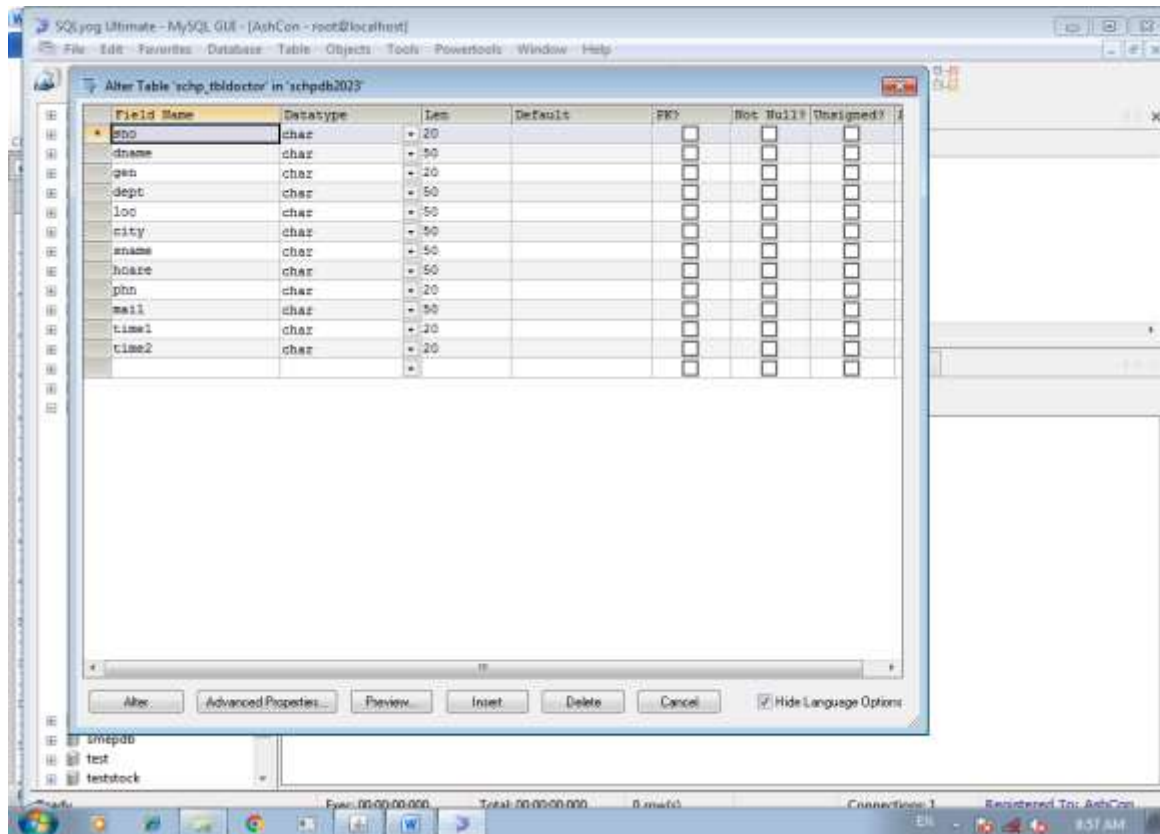
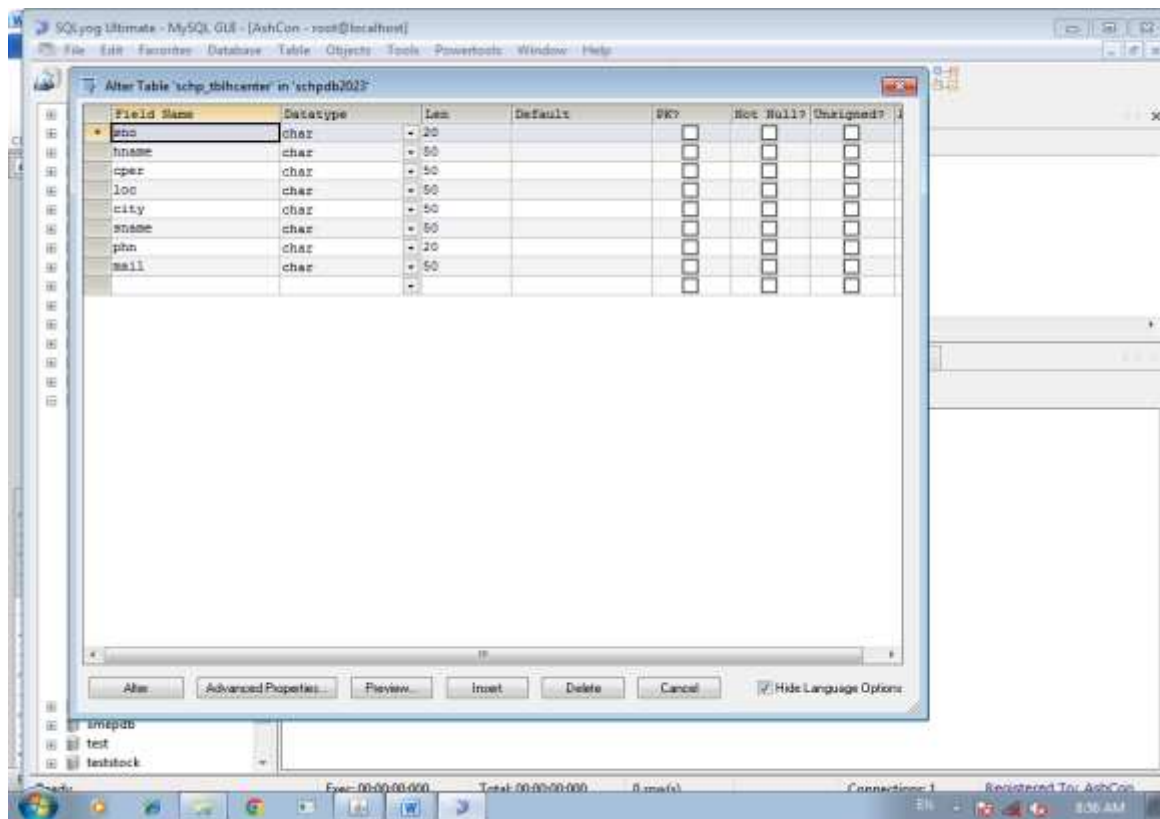
- a. Organisation Information
- b. Company Master
- c. Product Category Master
- d. Product Master
- e. Service Master
- f. General Service Information
- g. Health Care Center Master
- h. Doctors Information
- i. City / District Information
- j. Delivery Personnel Information

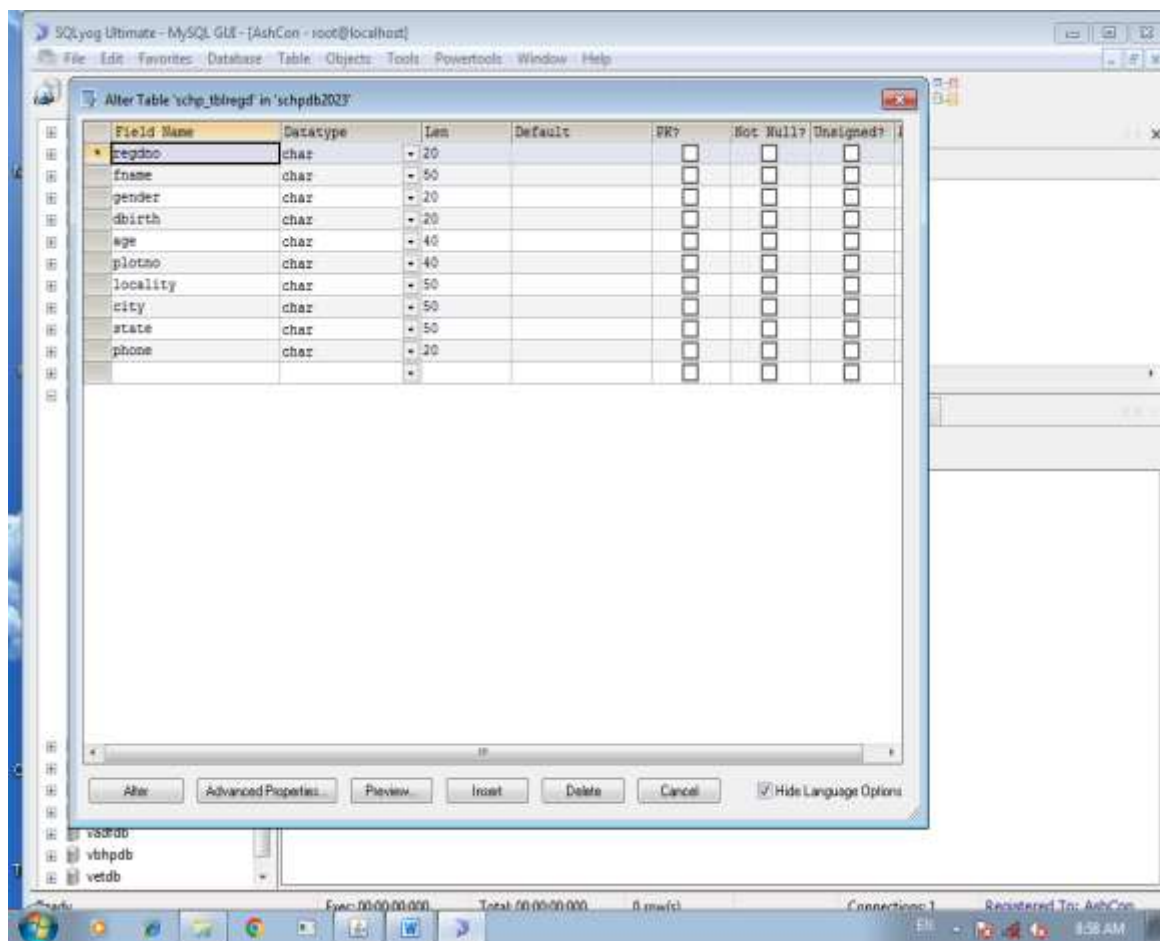
DATA STRUCTURES USED :



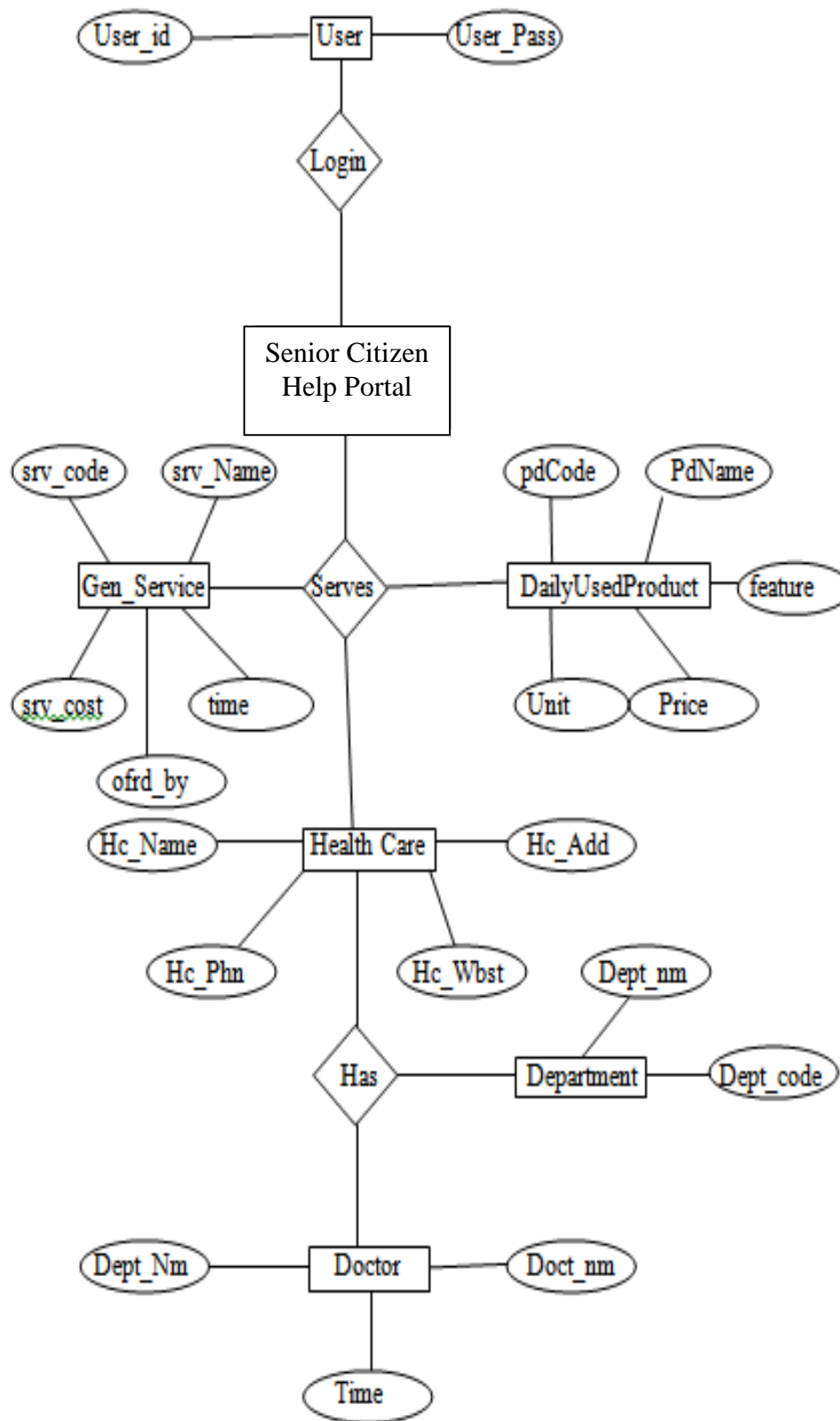




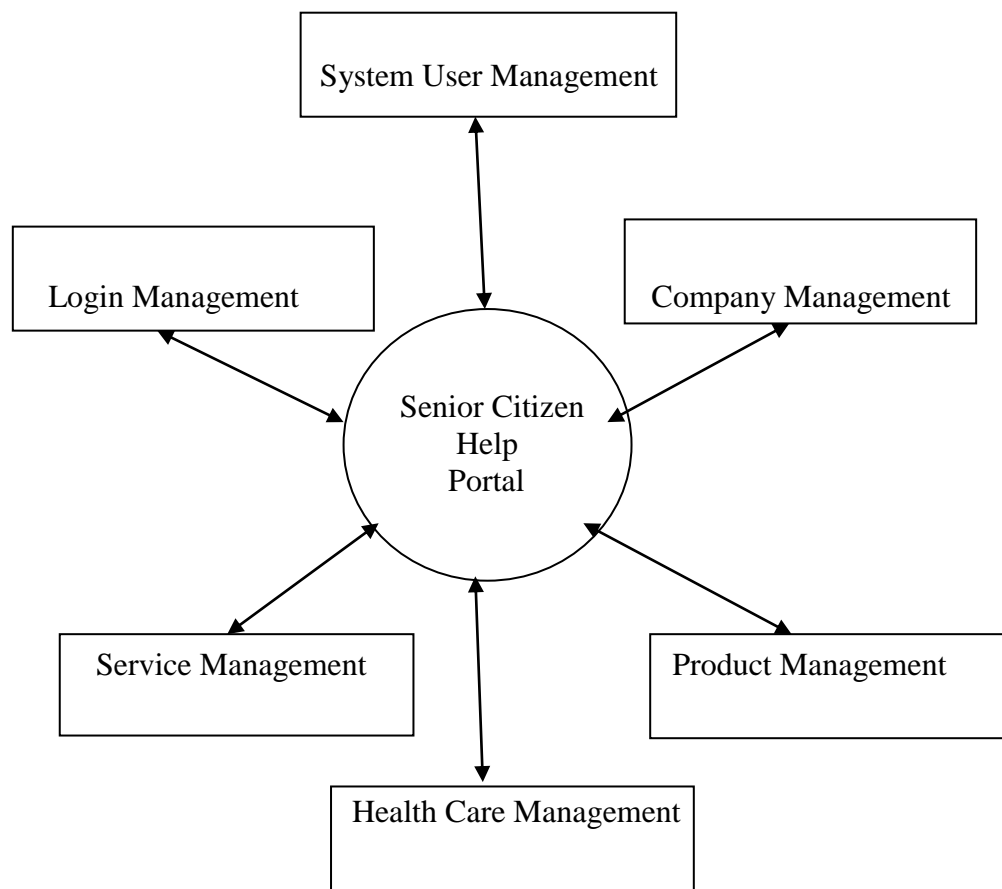




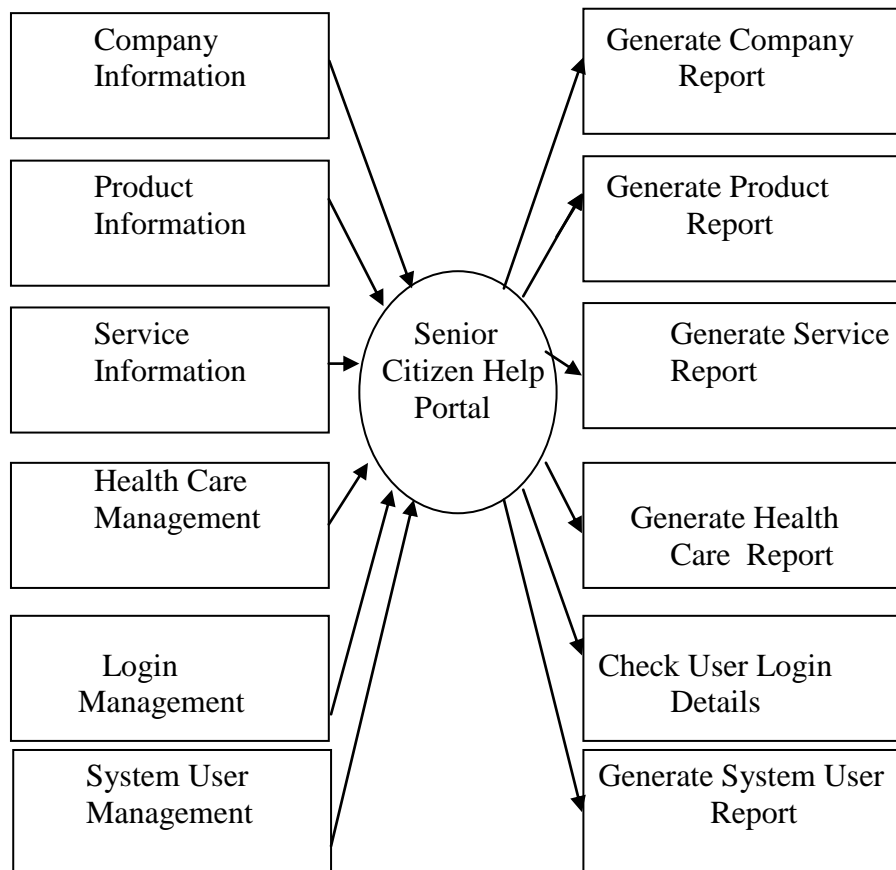
ER-DIAGRAM OF THE SYSTEM



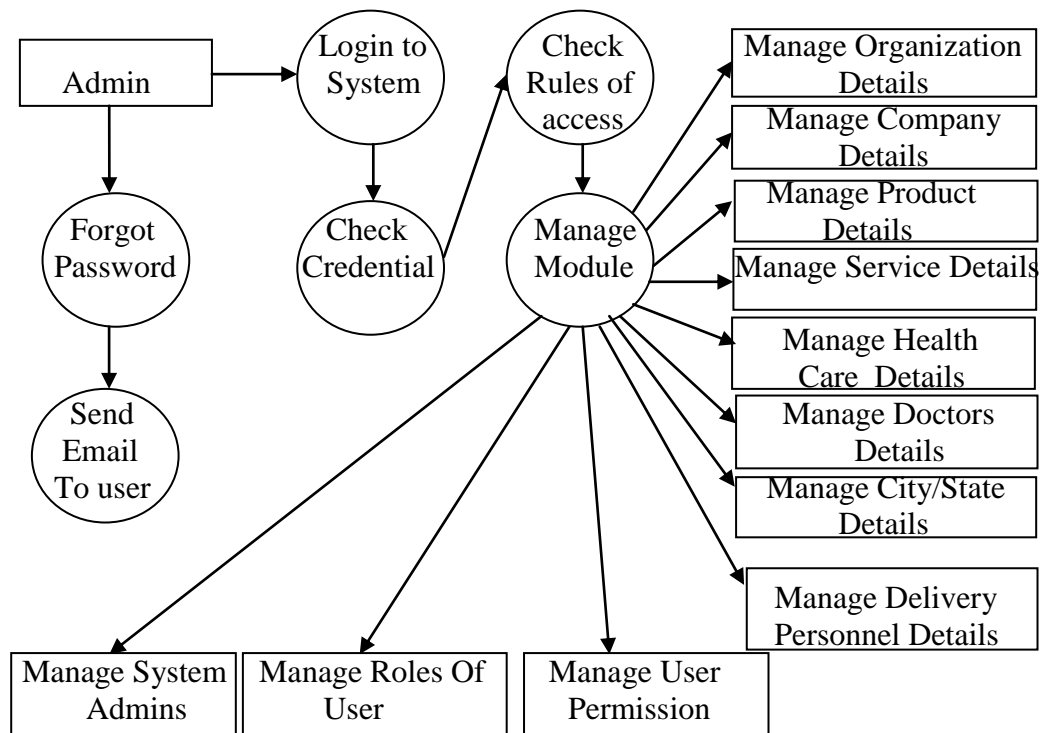
DFD OF THE SYSTEM



[Zero Level DFD –Senior Citizen Help Portal]

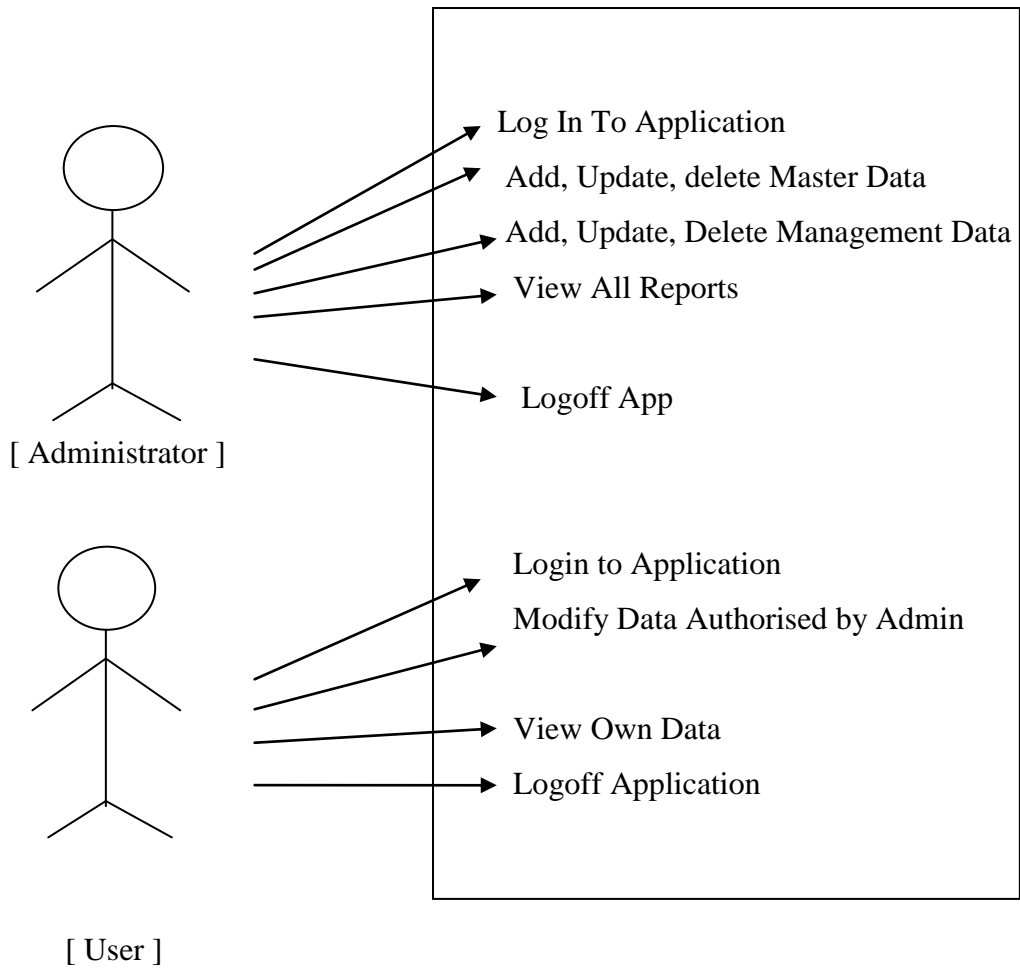


[First Level DFD – Senior Citizen Help Portal]

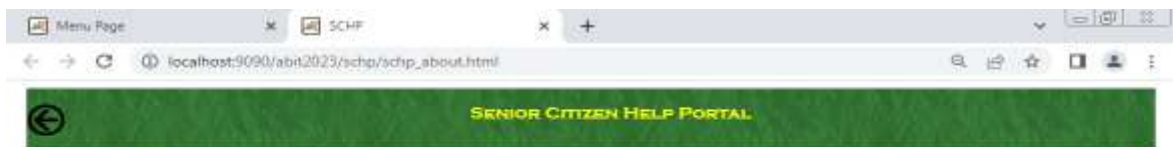
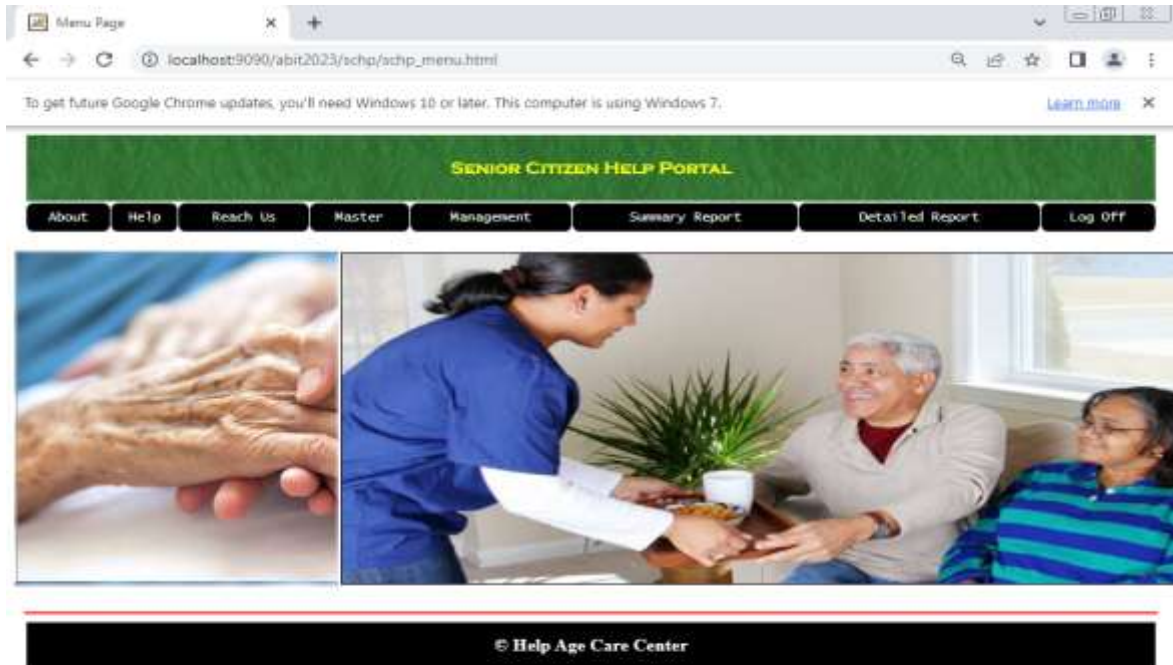


[Second Level DFD – Senior Citizen Help Portal]

USE CASE DIAGRAM

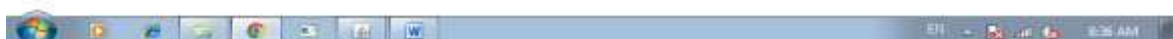


USER INTERFACE DESIGN :



- ABOUT US -

Help Age Care Center is the organization working for the care and concern of disadvantaged older persons for the state of Odisha. The organization targets to improve the quality of life of older persons by providing services in the form of delivering the day-to-day needs, health care requirements and many others of the older persons.



Menu Page x SCHP x +

localhost:9090/abit2023/schp/schp_rptsinfocats.jsp

← → ↻ 🔍 📄 ☆ 🗑️ 👤 ⋮

⬅️ **SENIOR CITIZEN HELP PORTAL**

Service Information [Any Serv.Cat.Name]

Service Category Name :

© Help Age Care Center



Menu Page x localhost:9090/abit2023/schp/schp_rptsinfocats.jsp?ombrname=electric&btuSub=+Submit+

← → ↻ 🔍 📄 ☆ 🗑️ 👤 ⋮

⬅️ **Service Information [electric]**

Help Age Care Center
CDA, Sec-6
Cuttack

Sl No.	Serial No	Service Category Name	Provided By	Address1	Address2	Contact No	e-Mail Id	Service Time-From	To
1	3001	electric	Ashu Moharana	Cuttack sadar	Cuttack	8327797329	ashishmoharana132@gmail.com	06:00AM	7:00PM
2	3004	electric	Umesh moduli	chowdwar	Cuttack		umeshkumar2001@gmail.com	07:30AM	09:00PM

Windows taskbar showing icons for various applications and the system clock at 8:28 AM.



- REACH US -

Help Age Care Center
CDA, Sec-6
Cuttack

Contact Person :-
Ashish Moharana
Contact No:-942712457
e-MailId :-helpagecenter@gmail.com

© Help Age Care Center



SENIOR CITIZEN HELP PORTAL

About Help Reach Us Master Management Summary Report Detailed Report Log Off

Organisation Information
Company Information
Product Category Information
Product Information
Service Category Information





© Help Age Care Center



Menu Page x Client side page x +

localhost:9090/abit2023/schp/schp_orgnc.html

SENIOR CITIZEN HELP PORTAL Extending a helping hand

ORGANISATION PROFILE

Registration No: Date:

Organisation Name:

Head Of Organisation:

Address:

Locality:

City:

State/UTerritory:

Phone No: e-mail:

GST No: Date:

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Bidyadharpur Cuttack,Odisha Pin-753004 Ph no:-8327797329

Menu Page x Search page x +

localhost:9090/abit2023/schp/schp_fc.jsp

SENIOR CITIZEN UPDATED DATA ENTRY INTERFACE

Registration no: Date:

Organisation Name:

Head Of Organisation:

Address:

Locality:

City:

State/UTerritory:

Phone No: e-mail:

GST No: Date:

Never left our parents alone, whether old age always be with them as everytime.

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Bidyadharpur Cuttack,Odisha Pin-753004 Ph no:-8327797329

Menu Page Company Information client pag

localhost:9090/abit2023/schp/schp_company.html

Company Information

Company code:

Company name:

Contact person:

Locality:

City:

State/U-Territory:

Phone No:

GST No:

e-mail id:

Date:

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Bidyadharpur Cuttack,Odisha Pin-753004, Ph no:-8327797329b
This page was developed by Ashis Moharana

Menu Page Search page

localhost:9090/abit2023/schp/schp_companyfc.jsp

COMPANY NEW INFORMATION DATA ENTRY INTERFACE

Company code:

Company name:

Contact person:

Locality:

City:

State/U-Territory:

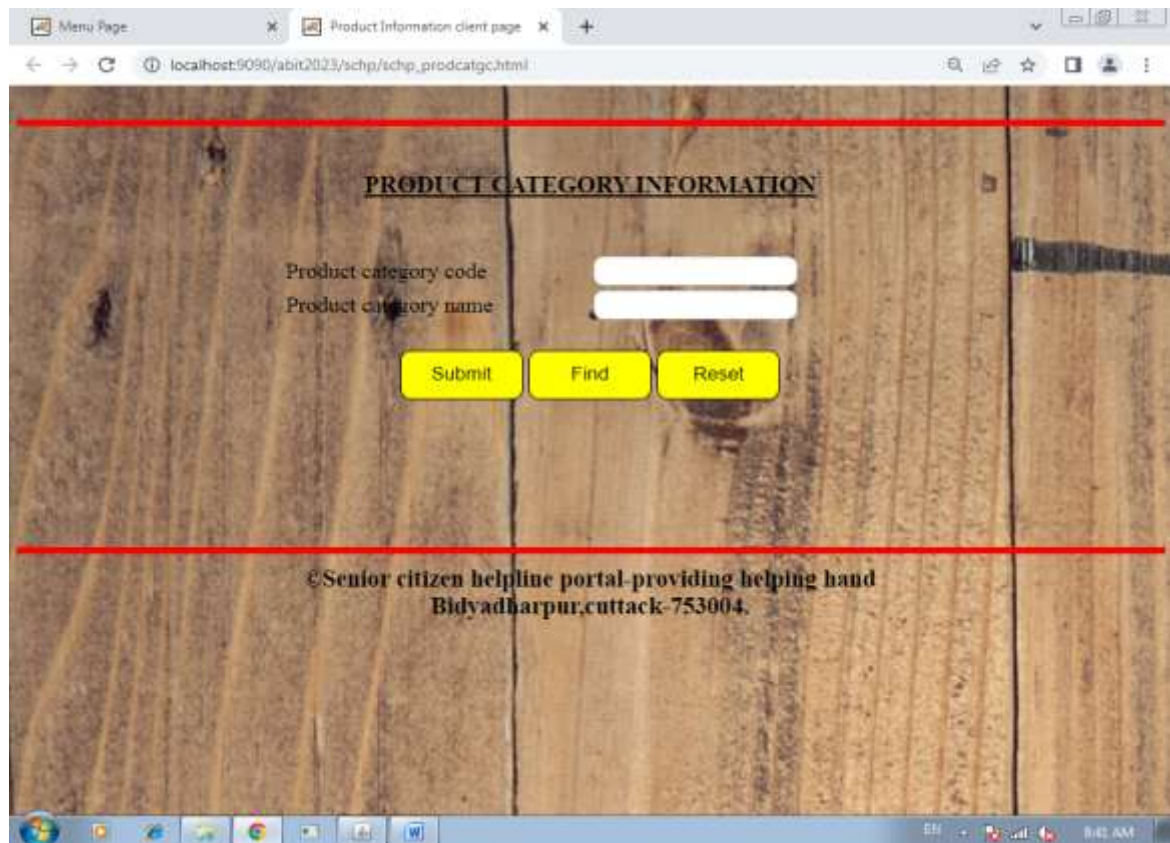
Phone No:

GST No:

e-mail id:

Date:

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Bidyadharpur Cuttack,Odisha Pin-753004 Ph no:-8327797329
Senior citizen help-line portal



Menu Page x Product Information client page x +

localhost:9090/abit2023/schp/schp_productinfoc.jsp

Product Information

Company name: --Select--
Product category name: --Select--
Product code:
Product name:
Price:
Stock:
G.S.T %age: --select--

Submit Find Reset

Senior citizen helpline portal,providing helping hand
Bidyadharpur,cuttack odisha phn no:-8327797329.

8:42 AM

Menu Page x Product Information client page x +

localhost:9090/abit2023/schp/schp_productfc.jsp

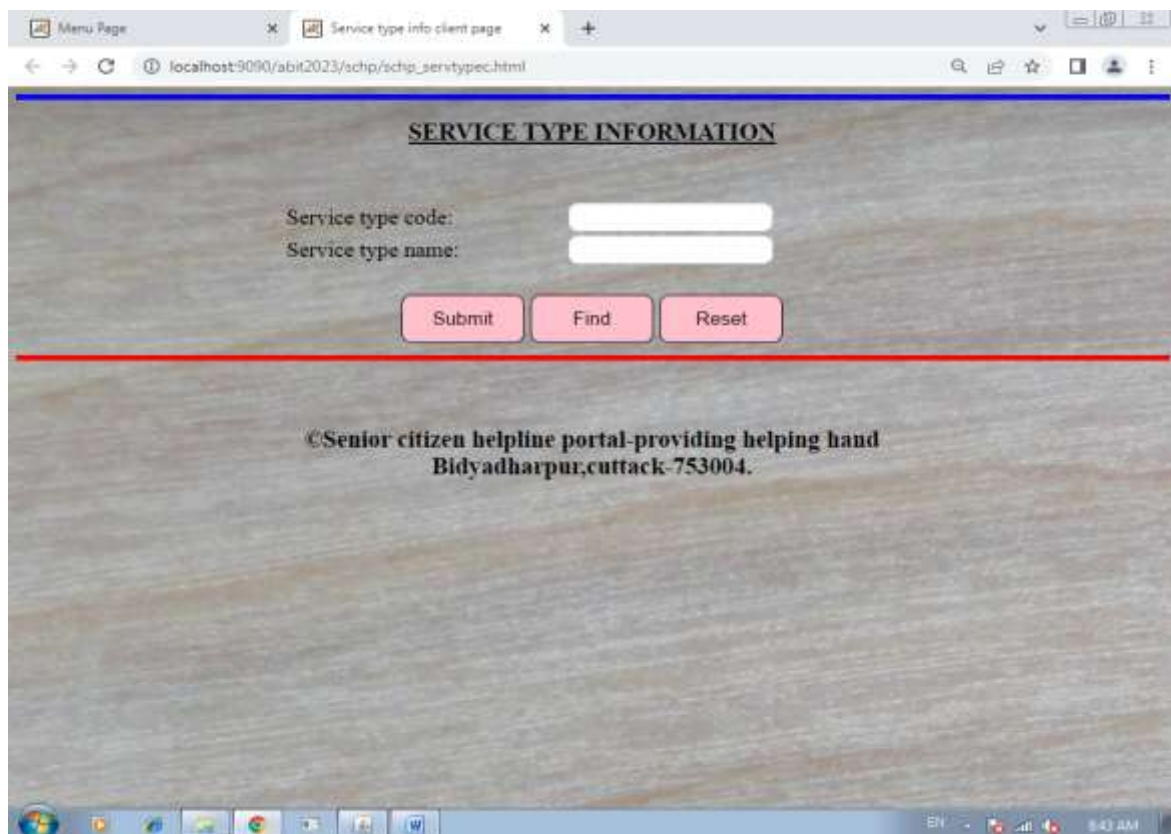
Product Information

Product code: --Select--
Company name: --Select--
Product category name: --Select--
Product name:
Price:
Stock:
G.S.T %age: --select--

Update Delete Back

Senior citizen helpline portal,providing helping hand
Bidyadharpur,cuttack odisha phn no:-8327797329.

8:42 AM



Menu Page Information

localhost:9090/abis2023/schp/schp_servicec.jsp

SERVICE INFORMATION

Serial No:

Service Type name:

Provided by:

Gender: ☐ Male ☐ Female

Locality:

City/District:

State/U.territory:

Phn no:

e-mailid:

Timing: From: To:

©Senior citizen help-line portal

Designed and developed by Ashis Moharana

BCA,MCA(consd) Bidyadharpur,Cuttack Odisha pin-753004

Menu Page Search page

localhost:9090/abis2023/schp/schp_servicec.jsp

SERVICE INFORMATION UPDATE DATA ENTRY INTERFACE

Serial no:

Service type Name:

Provided By:

Gender: ☐ Male ☐ Female

Locality:

City.District:

State/U.territory:

Phn no:

e-mail:

Timing: From: To:

©Help Age Care center-Providing helping hand

Bidyadharpur Cuttack,Odisha,Pin-753004 Ph no:-8327797329.

Menu Page x SCHP x +

localhost:9090/abit2023/schp/schp_hcenterc.jsp

HEALTH CARE CENTER

Health Care Center Information

Serial No. :

Health Care Center Name :

Contact Person :

Locality :

City/District Name :

State :

Phone No. :

e-Mail Id :

©Senior citizen helpline portal-providing helping hand
Bidyadharpur,cuttack-753004.

EN 8:48 AM

Menu Page x SCHP x +

localhost:9090/abit2023/schp/schp_hcenterfc.jsp

HEALTH CARE CENTER

Health Care Center Information

Serial No. :

Health Care Center Name :

Contact Person :

Locality :

City/District Name :

State :

Phone No. :

e-Mail Id :

©Senior citizen helpline portal-providing helping hand
Bidyadharpur,cuttack-753004.

EN 8:45 AM

Menu Page x SCHP x +

localhost:9090/abit2023/schp/schp_doctorc.jsp

SENIOR CITIZEN HELP PORTAL

Doctor's Information

Serial No. :

Doctor's Name :

Gender : ☐ Male ☐ Female

Department :

Locality :

City/District Name :

State :

Health Care Name :

Phone No. :

e-Mail Id :

Time : From : To :

© Help Age Care Center

Menu Page x SCHP x +

localhost:9090/abit2023/schp/schp_doctorfc.jsp

SENIOR CITIZEN HELP PORTAL

Doctor's Information

Serial No. :

Doctor's Name :

Gender : ☐ Male ☐ Female

Department :

Locality :

City/District Name :

State :

Health Care Name :

Phone No. :

e-Mail Id :

Time : From : To :

Menu Page x SCHP x +

localhost:9090/abt2023/schp/schp_regdc.jsp

SENIOR CITIZEN HELP PORTAL

Registration Form

Registration No

Full Name

Gender : ☐ Male ☐ Female

Date Of Birth :

Age(By Today) :

House Name/Plot No :

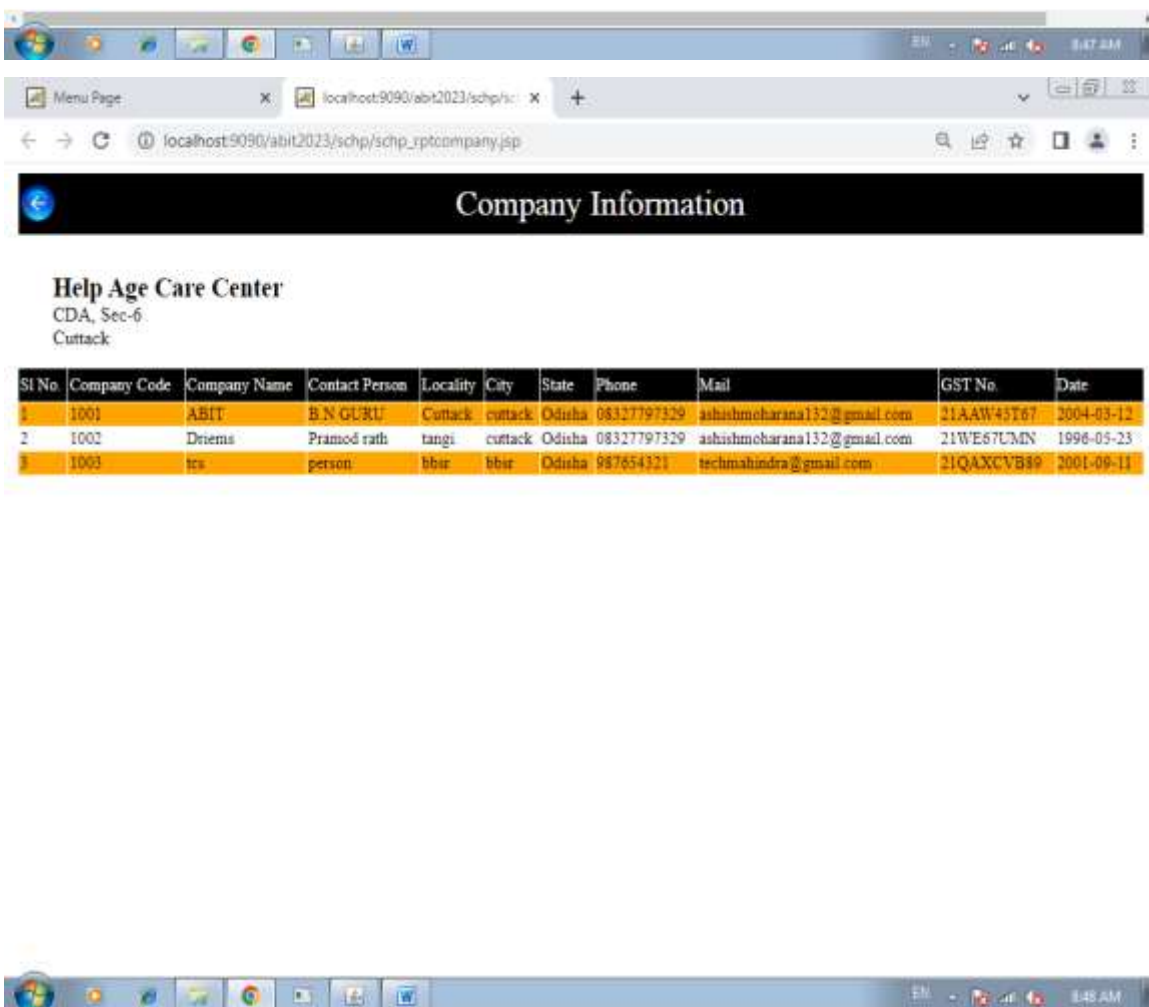
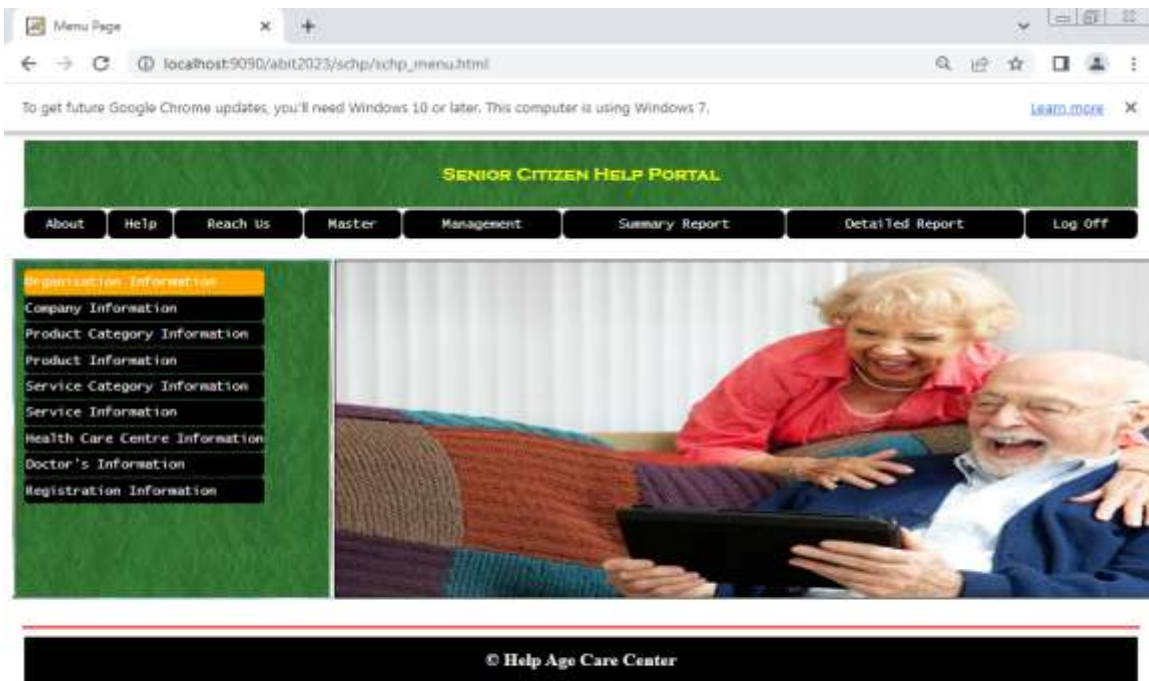
Locality

City/District Name :

State/Union Territory :

Phone No

© Help Age Care Center



Menu Page localhost:9090/abit2023/schp/s: +

localhost:9090/abit2023/schp/schp_rptprocat.jsp

Product Catagory Information

Help Age Care Center
CDA, Sec-6
Cutback

Sl No.	Product Cat. Code	Product Cat Name
1	1001	blackcoffee
2	1002	Potato chips
3	1003	peanuts

EN 8:48 AM

Menu Page localhost:9090/abit2023/schp/s: +

localhost:9090/abit2023/schp/schp_rptproduct.jsp

Product Information

Help Age Care Center
CDA, Sec-6
Cutback

Sl No.	Company Name	Product Cat Code	Product Code	Product Name	Price	Stock	GST %age
1	ABIT	blackcoffee	1001	xyz	250	2	8
2	Dreams	Potato chips	1002	lays	10	3	12

EN 8:48 AM

Menu Page localhost:9090/abit2023/schp/schp_rptcat.jsp

Service Category Information

Help Age Care Center
CDA, Sec-6
Cuttack

Sl No.	Service Category Code	Service Category Name
1	2002	electric
2	2003	xyz
3	2004	XYZ
4	2001	repairing
5	2004	ctad

Menu Page localhost:9090/abit2023/schp/sc: localhost:9090/abit2023/schp/schp_rptsinfo.jsp

Service Information

Help Age Care Center
CDA, Sec-6
Cuttack

Sl No.	Service No	Service Name	Provided By	Gender	Locality	City	State	Contact No	e-Mail Id	Service Time-From	To
1	3001	electric	Ashis Moharana	M	Cuttack sadar	Cuttack	Odisha	8327797329	ashishmoharana132@gmail.com	06:00AM	7:00PM
2	3002	repairing	Anuja Barick	F	Aali	Kendrapada	Odisha	9876543210	anuja2000@gmail.com	7:00AM	7:00PM
3	3003	ctad	B Basudev	M	chowdwar	cuttack	Odisha		bbarudev421@gmail.com	8:00AM	7:00PM
4	3004	electric	Unesh muduli	M	chowdwar	cuttack	Odisha		uneshkumar2001@gmail.com	07:30AM	09:00PM



Help Age Care Center

CDA, Sec-6
Cuttack

Sl No	Serial No	Health Center Name	Contact Person	Locality	City	State Name	Phone	Mail
1	101	SARP Hospital	Mr. B.K. Mohanty	MADHUPATNA	CUTTACK	ODISHA	2455788	sarp@gmail.com



Help Age Care Center

CDA, Sec-6
Cuttack

Sl No	Serial No	Doctor's Name	Gender	Department	Locality	City	State	Health Care Center	Phone	Mail	From	To
1	201	Dr. Prasad Chand	Male	null	Madhupatna	null	Odisha	SARP Hospital	2344785	sepchand@yahoo.com	10 am	5 pm



Registration Information

Help Age Care Center
CDA, Sec-6
Cuttack

Sl No.	Registration No	Full Name	Gender	Date Of Birth	Age By Today	Plot No	Locality	City	State	Phone
1	630201	PRAKASH KUMAR SINGH	M	1960-03-25	63y 0m 20d	25D-3	MADHUPATNA	Odisha	637431245	

To get future Google Chrome updates, you'll need Windows 10 or later. This computer is using Windows 7. [Learn more](#)

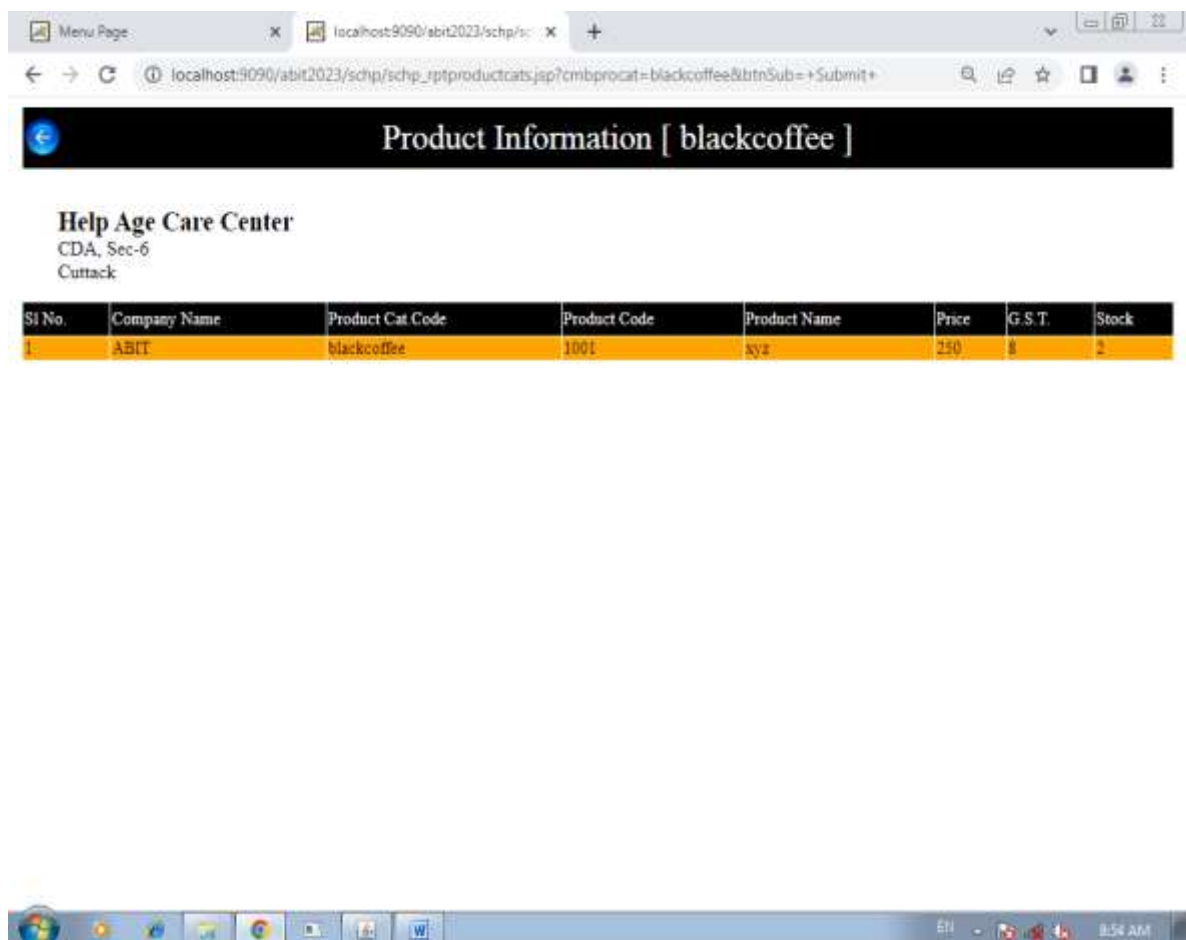
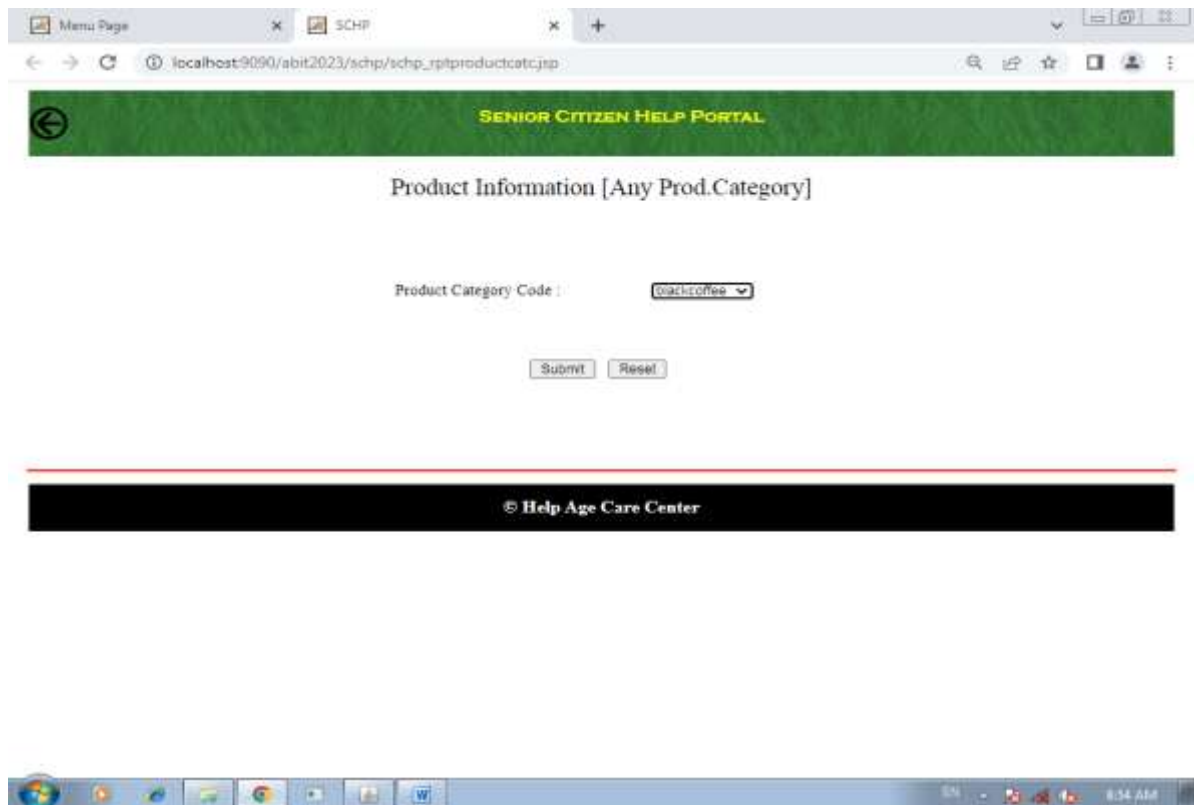
SENIOR CITIZEN HELP PORTAL

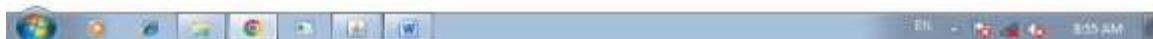
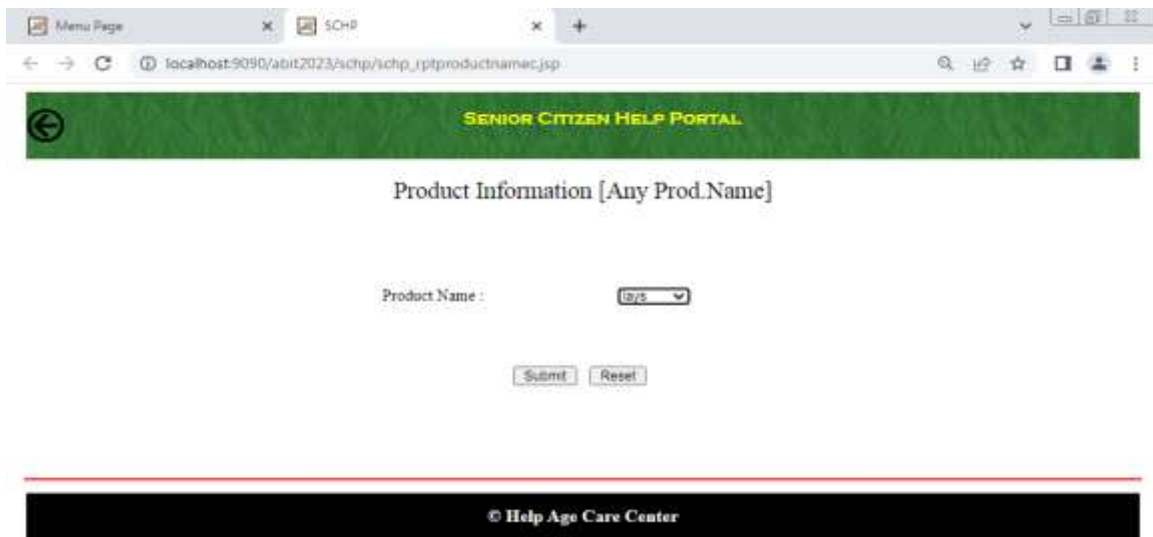
[About](#) [Help](#) [Reach Us](#) [Master](#) [Management](#) [Summary Report](#) [Detailed Report](#) [Log Off](#)

Product Information[By Prod.Category]
Product Information[By Prod.Name]
Health Care Centre Information[By Name]
Health Care Centre Information[By City]
Doctor Information[By Department]
Doctor Information[By City]
Doctor Information[By Health Care Cent]
Delivery Personnel Information[By City]
Service Information[By Serv.Category]



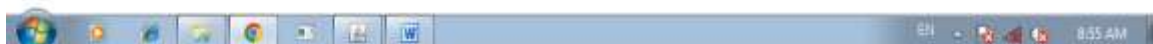
© Help Age Care Center

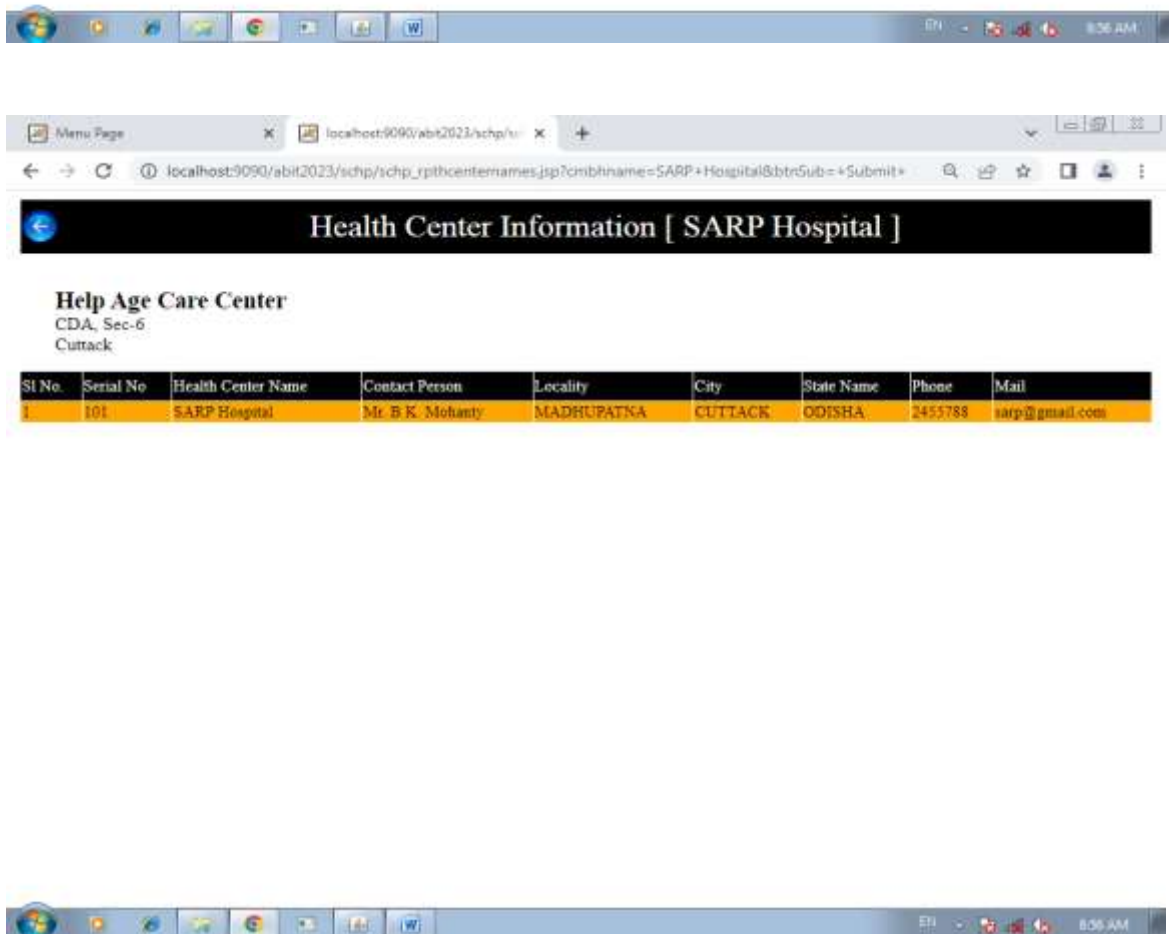
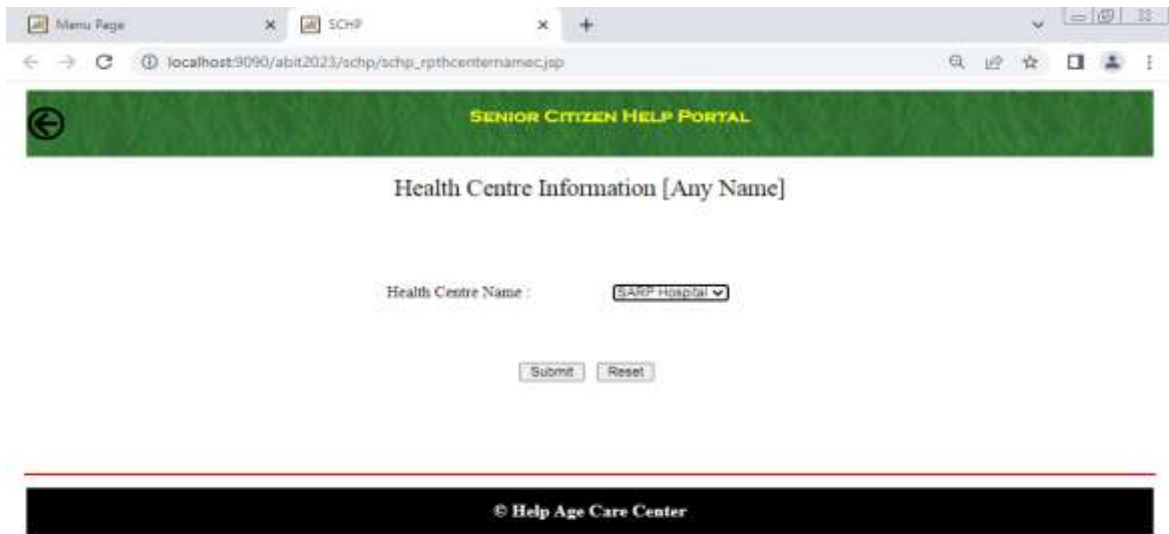


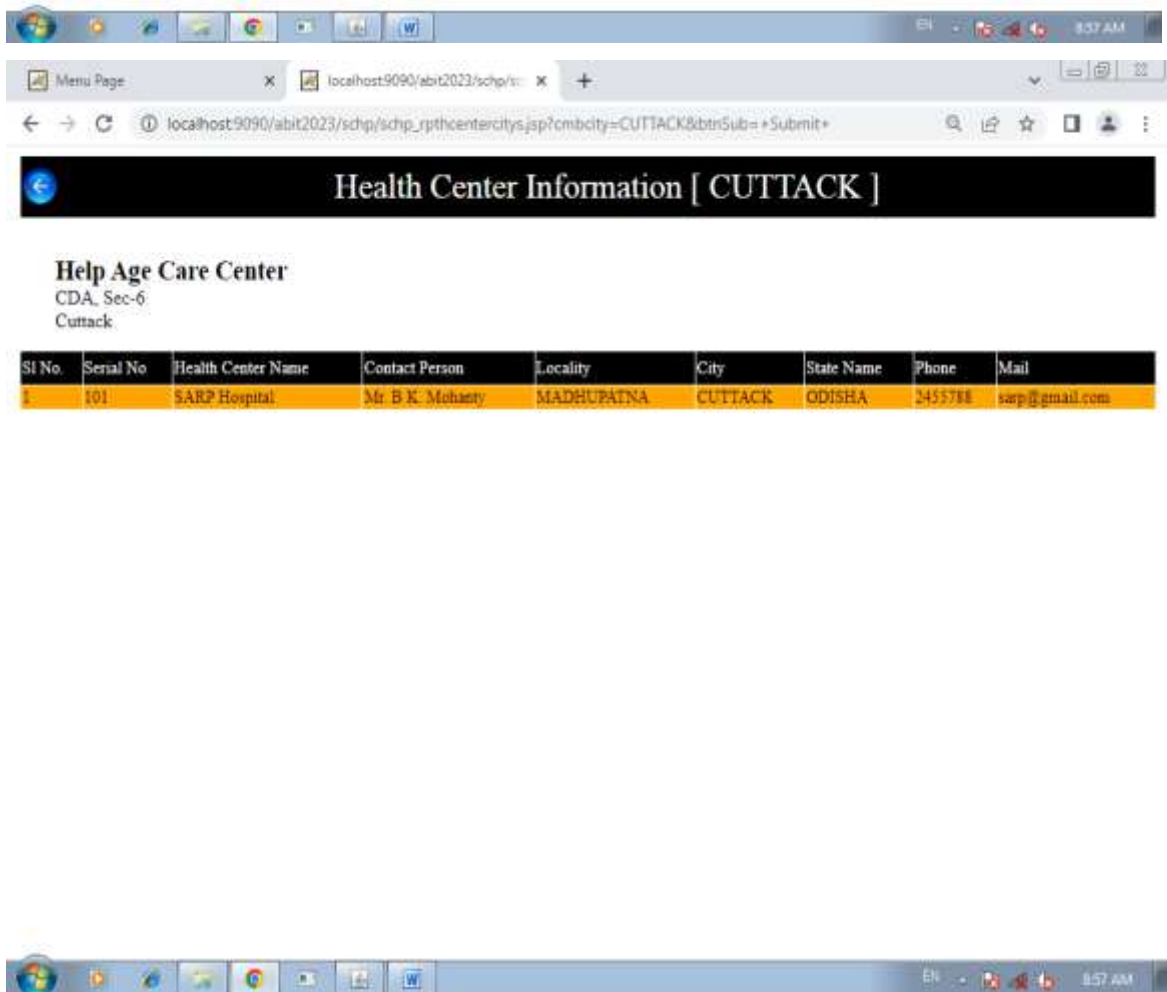


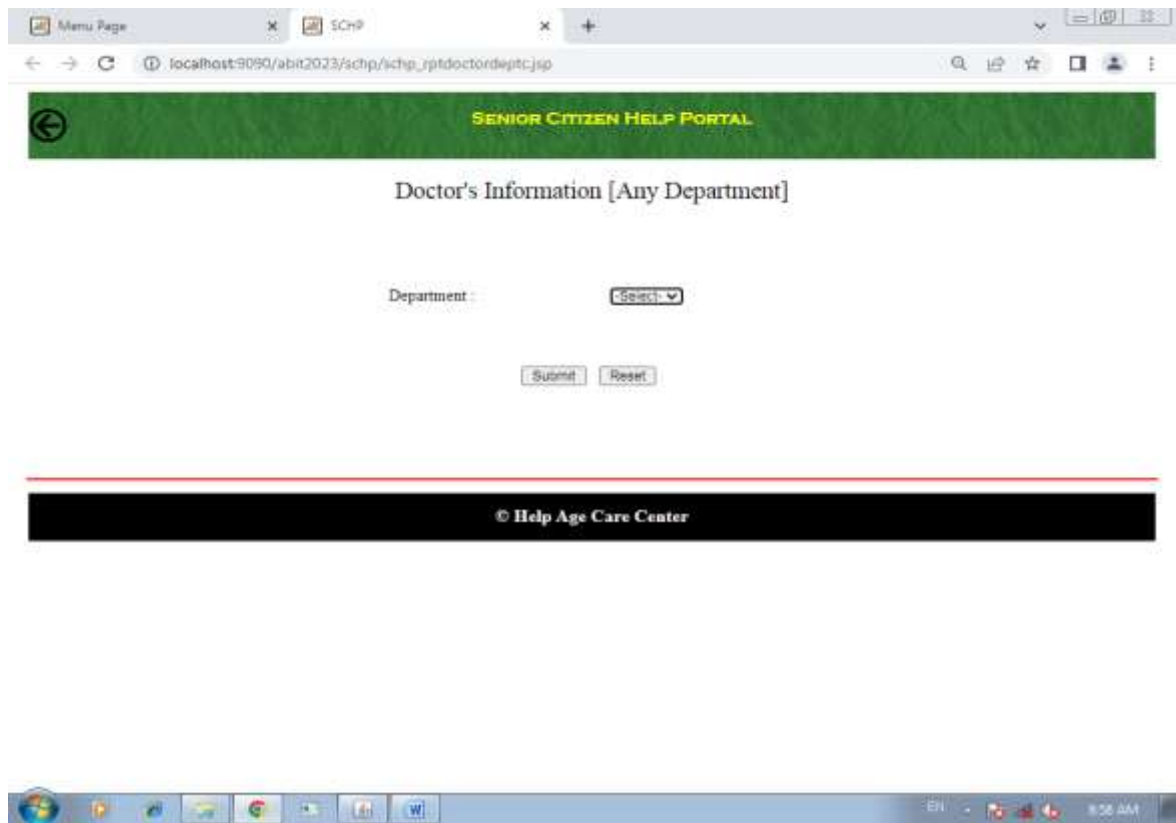
Help Age Care Center
CDA, Sec-6
Cuttack

Sl No.	Company Name	Product Cat.Code	Product Code	Product Name	Price	G.S.T.	Stock
1	Dezemis	Potato chips	1002	lays	10	12	3









Menu Page x SChp x +

localhost:9090/abit2023/schp/schp_rptdoctorhcare.jsp

SENIOR CITIZEN HELP PORTAL

Doctor's Information [Any Health Care Centre]

Health Care Centre : SARP Hospital

Submit Reset

Help Age Care Center



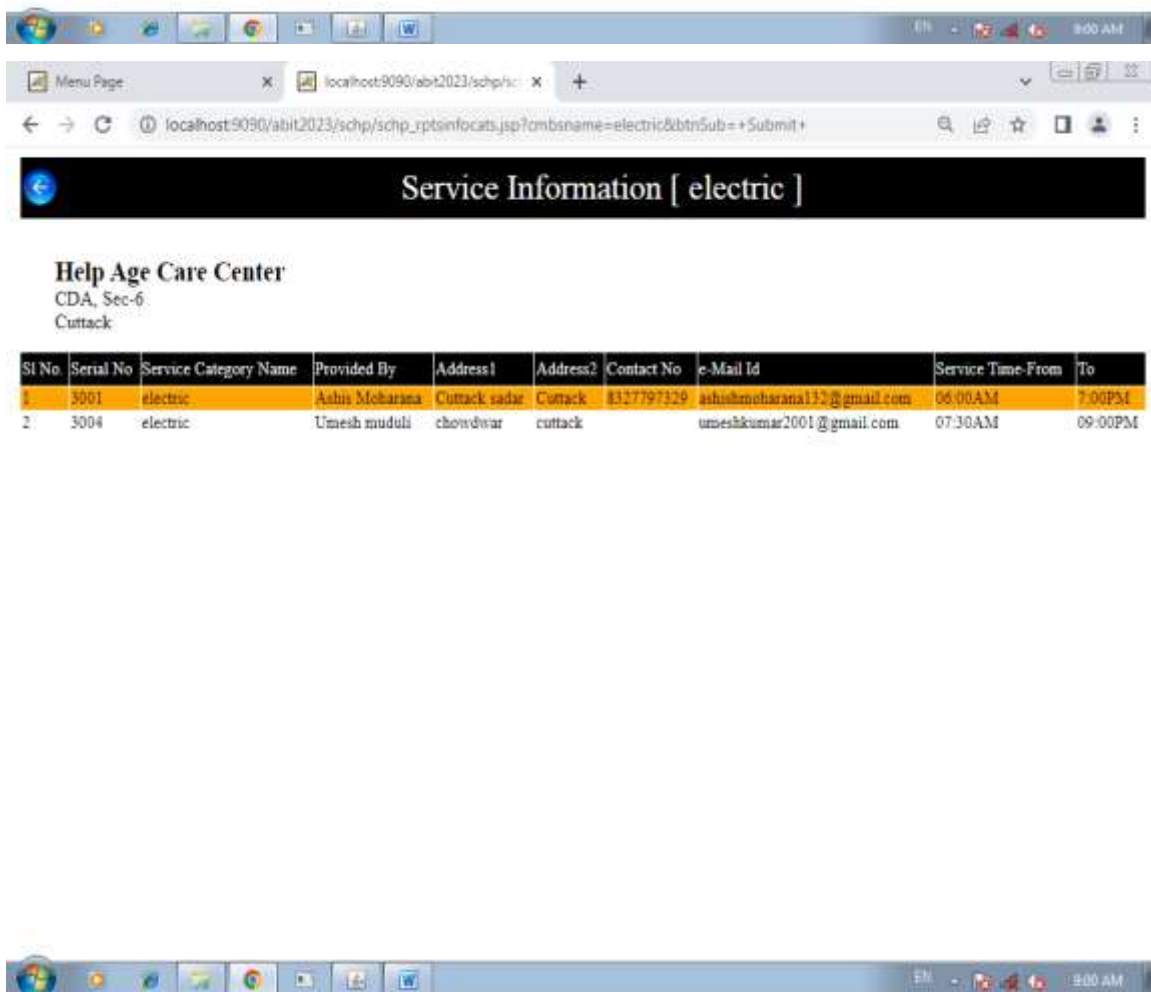
Menu Page x localhost:9090/abit2023/schp/schp_rptdoctorhcare.jsp?cmhcare=SARP+Hospital&btr\$ub=+Submit+

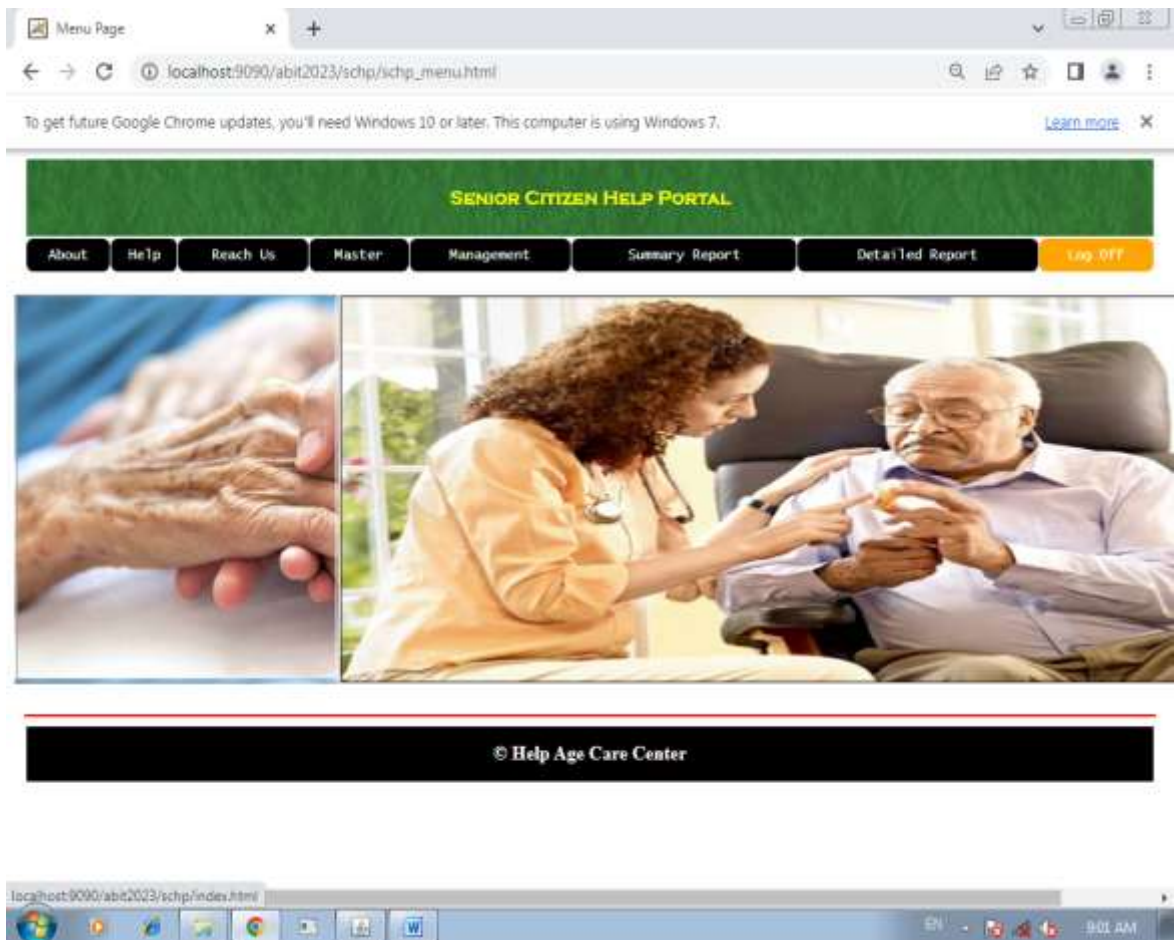
Doctor's Information [SARP Hospital]

Help Age Care Center
CDA, Sec-6
Cutback

Sl No.	Serial No	Doctor's Name	Gender	Department	Locality	City	State	Health Care Center	Phone	Mail	Time1	Time2
1	201	Dr. Prasad Chand	Male	null	Madhupatna	null	Odisha	SARP Hospital	3344785	sepchand@yahoo.com	10 am	5 pm







SAMPLE CODE OF THE PROJECT

```
<html>

<head>

<title>Client side page</title>

<script language="javascript">

        function gosearch(){

                window.location="schp_fc.jsp";

        }

</script>

<style type="text/CSS">

.btn{

        background-color:light blue;

        font-size:19px;

        border-radius:10px;

        padding:1px;

        cursor:pointer;

        width:120px;

        height:50px;

}

.txtboxsize{

        width:200px;

        border-radius:10px;
```

```
height:30px;

border-style:dotted;

border-color:red;

}
```

```
.clist{

width:80%;

border-radius:10px;

height:30px;

}
```

```
td{

font-size:22px;

}
```

```
h1{

color:blue;

}
```

```
</style>
```

```
</head>
```

```
<body background="photo.jpg">
```

```
<table border="1" width="100%">
```

```
<tr height="80">
```

```
<td bgcolor="cyan" align="center" valign="middle">
```

```
<font size="6" color="red"><u>SENIOR CITIZEN HELP PORTAL</u></font>
```

```
<sub>Extending a helping hand</sub>
```

```

</td>

</tr>

</table>

<center>





<h1 align="center"><u>ORGANISATION PROFILE</u></h1>

<form name="f1" action="schp_orgns.jsp" method="post">

<table width="600" border="0">

<td>Registration No:</td>

<td><input type="text" name="txtRno" class="txtboxsize" required></td>

<td>Date:</td>

<td><input type="date" name="txtDt1" class="txtboxsize" required></td>

<tr>

</tr>

<tr>

<td>Organisation Name:</td>

<td><input type="text" name="txtOname" class="txtboxsize" required></td>

</tr>

<tr>

<td nowrap>Head Of Organisation:</td>

<td><input type="text" name="txtHead" class="txtboxsize" required></td>

</tr>

<tr>

```

```

<td align="center" nowrap>Address:</td><br>

</tr>

<tr>

<td nowrap>Locality:</td>

<td><input type="text" name="txtLoc" class="txtboxsize" required></td>

</tr>

<tr>

<td nowrap>City:</td>

<td><input type="text" name="txtCity" class="txtboxsize" required></td>

</tr>

<tr>

<td nowrap>State/UTerritory:</td>

<td>

<select name="cmbstate" class="cblist" required>

<option value=" " >---select---</option>

<option value="Andhra Pradesh">Andhra Pradesh</option>

<option value="Arunachal Pradesh">Arunachal Pradesh</option>

<option value="Assam">Assam</option>

<option value="Bihar">Bihar</option>

<option value="Chhattisgarh">Chhattisgarh</option>

<option value="Goa">Goa</option>

<option value="Gujarat">Gujarat</option>

<option value="Haryana">Haryana</option>

<option value="Himachal Pradesh">Himachal Pradesh</option>

<option value="Jharkhand">Jharkhand</option>

```

<option value="Karnataka">Karnataka</option>

<option value="Kerela">Kerela</option>

<option value="Madhya Pradesh">Madhya Pradesh</option>

<option value="Maharastra">Maharastra</option>

<option value="Manipur">Manipur</option>

<option value="Meghalaya">Meghalaya</option>

<option value="Mizoram">Mizoram</option>

<option value="Nagaland">Nagaland</option>

<option value="Odisha">Odisha</option>

<option value="Punjab">Punjab</option>

<option value="Rajasthan">Rajasthan</option>

<option value="Sikkim">Sikkim</option>

<option value="Tamil Nadu">Tamil Nadu</option>

<option value="Telengana">Telengana</option>

<option value="Tripura">Tripura</option>

<option value="Uttar Pradesh">Uttar Pradesh</option>

<option value="Uttrakhand">Uttrakhand</option>

<option value="West Bengal">West Bengal</option>

<option value="Andaman and Nicobar Islands">Andaman and Nicobar Islands</option>

<option value="Chandigarh">Chandigarh</option>

<option value="Dadra and Nagar Haveli and Daman and Diu">Dadra and Nagar Haveli
and Daman and Diu</option>

<option value="Jammu & Kashmir">Jammu & Kashmir</option>

<option value="Ladakh">Ladakh</option>

<option value="Lakshwadeep">Lakshwadeep</option>

```

<option value="Puducheery">Puducheery</option>

</select>

</td>

</tr>

<td>Phone No:</td>

<td><input type="text" name="txtPno" class="txtboxsize" required></td>

<td>e-mail id:</td>

<td><input type="text" name="txtemail" class="txtboxsize"required></td>

<tr>

</tr>

<td>GST No:</td>

<td><input type="text" name="txtGSTNo" class="txtboxsize"required></td>

<td>Date:</td>

<td><input type="date" name="txtDt2" class="txtboxsize"required></td>

<tr>

</tr>

</table><br>

<input type="submit" name="btnsub" value="Submit" class="btn">

<input type="button" name="btnfind" value="Find" class="btn" onclick="gosearch()">

<input type="reset" name="btnres" value="Reset" class="btn"><br><br>

<table border="1" width="100%">

<tr height="80">

<td bgcolor="yellow" align="center" valign="middle">

&copy;Help Age Care center-Providing helping hand<br>

Bidyadharpur Cuttack,Odisha Pin-753004

```

Ph no:-8327797329

</table>

</form>

</body>

</html>


```

<% @ page language="java" contentType="text/html" import="java.sql.*" %>

<html>

    <head>

        <title>Server page</title>

    </head>

<body>

<%!

Connection conn;

Statement stmtsave;

String regdno,regdate,oname,headorg,loc,ct,state,phn,mail,gst,gstdat;

public void doConnect(){

    try{

        Class.forName("com.mysql.jdbc.Driver");

    }

    catch(ClassNotFoundException ex){

        System.out.println("unable to load driver");

    }

    try{

conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/schpdb2023","root","root");

    }

    catch(SQLException ex2){

        System.out.println("Unable to connect"+ex2);

    }

}

```

```

    }

    %>

    <%

    regdno=request.getParameter("txtRno");

    regdate=request.getParameter("txtDt1");

    oname=request.getParameter("txtOname");

    headorg=request.getParameter("txtHead");

    loc=request.getParameter("txtLoc");

    ct=request.getParameter("txtCity");

    state=request.getParameter("cmbstate");

    phn=request.getParameter("txtPno");

    mail=request.getParameter("txtemail");

    gst=request.getParameter("txtGSTNo");

    gstdate=request.getParameter("txtDt2");

    %>

    <%

    doConnect();

    try{

        stmtsave=conn.createStatement();

        stmtsave.executeUpdate("insert into schp_tblorgn

values('"+regdno+"','"+regdate+"','"+oname+"','"+headorg+"','"+loc+"','"+ct+"','"+state+"','

"+phn+"','"+mail+"','"+gst+"','"+gstdate+"')");

        out.println("your data submitted succesfully");

    }

    catch(SQLException ex1){

```

```
        out.println("Unable to save try again");  
    }  
  
    %>  
    </body>  
</html>
```

CODE EFFICIENCY & CODE OPTIMIZATION

The task of coding is carried out once the analysis and design is over. It depends on how well the analysis and design is done. Thus, the better the analysis and design, easier it becomes for the programmer to code. But the code has to be judged for its efficiency and worthiness. Code efficiency defines how efficient is the code generated and whether it satisfies the needs as expressed in the design, or not. Thus, it reflects the overall quality of the software. Code efficiency comes in conjunction with code optimization, total time spent on coding and validation specification. “Optimized code may not always be efficient, but efficient code always satisfies the user requirements”

ERROR HANDLING

Error handling is the process to provide proper methodology to implement error detection and correction as a continuous process during the development process. This process has been applied at each phase of the software development process of the current system.. Moreover to provide run time error handling, the powerful exception handling has been applied at the points to minimize runtime failure and preserve the consistency of the system.

Validation Checks

Validation is an important part of the application being designed. This ensures the data consistency, protects accidentally deletion, modification of the data. In the system validation checking is applied both at database level and program level. At database level, while designing the tables to contain the information it has been maintained to implement validation by defining constraints for different data items in the application.

At program level proper measures and attention has been given to prevent the entry of invalid data in to the system.

Testing

Scope of Testing

Once the system has been developed the system has to be tested and if no Bugs found it is to be implemented. A good test cannot solve a bad program and testing can never prove a program is right. A good test case design that detects many errors is alarming Testing requires skill and knowledge

Testing Platforms

If the system is approved to be error free it can be implemented. Implementation includes proper training to the end user. The implemented software should be maintained for prolonged running of the software. For every dollars spend developing software we have spend at least two dollar to maintaining it.

Methods Used

Various methods include in testing the system are.

1. Unit Testing

Unit tests are at program level where the programmer himself can test at the system for known bugs. Unit testing are at involves the tests carried out on modules programs, which make up a system. This is also called as Program Testing. The Units in the system are modules and the routines that are assembled and integrated to perform a specific function. In a large System, many modules at different levels are needed, unit testing focuses first on the modules, independently of one another, to locate errors.

The Program to be tested for correctness of logic applied and should locate error in coding. For example test cases are needed to determine how the system handles if an intruder try to enter the application. User password will be encrypted and checks with the database. The Unauthorized user will be warned with a message.

Valid and invalid data should be created and the programs should be made to the process this data to catch errors. For example a student who has completed the course cannot access the lab resources and he/she cannot appear for any other tests conducted by the institute.

2. Integration Testing

Integration testing begins with a software structure that has been defined using stubs (a dummy module) that allows testing of super ordinate (calling Program) control and interface correctness. Stubs are replaced by unit tested modules or builds integration testing proceeds. For Integration testing, several factors should be considered:

Are routines to be integrated in a pure top-down manner or should build be developed to test sub function first?

In what order should major software functions be incorporated?

Is the scheduling of modules code and test consistent with the order of integration?

Is special hardware required to test certain routines?

Developed a list of all modules. Associated with each module is its unit test completion date, date of first integration, destination (e.g. build into which it will be incorporated or functional level) and a reference to required test data/result for that module.

Another important consideration during integration test planning is the amount of test software (e.g., drivers, test case generation) that must be developed to adequately test the required functionality.

3. System testing

The test plan is a product of software design. The test plan specifies the objectives of testing, test completion criteria, system Integration Planed, methods to be used on modules and particular test cases to be used.

Functional test – specify operation conditions, input values and expected results

Performance test –should be design to verify response time, throughput, primary and secondary memory utilization and traffic rates on data channels and communication channels.

Stress test-is designed to overload a system in various ways.

Structural test- are concerned with examining the internal processing logic of a software system.

Any software has to undergo robust test in each and every stage. Any shortcoming or bugs must be rectified and tested. This software has undergone the tests thoroughly. A system is tested for online responses, volume of transactions, stress, recovery from failure, and usability. Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design and coding

System testing involves two types of testing, Integration testing and acceptance testing. In integration testing all the modules are integrated the interfaces between the modules are tested. Bottom up integration is the traditional strategy is to integrate the components of a software system into a functioning whole. Top Down integration starts from the main module along one or two intermediate subordinated routines in the system structure

Testing Strategies

Testing is a process of executing a program with the intent of finding an error. A good test case is one that has a high probability of finding an as yet undiscovered error.

Successful test is one that uncovers as a yet undiscovered error.

A product can be tested in two ways,

Black box Testing

Knowing the specified function that a product has been designed to perform, tests can be conducted that demonstrate each function is fully operational.

White box Testing

Knowing the internal working of a product, tests can be conducted to ensure that the internal components have been adequately exercised. The tests of this software were conducted on the following fashion.

1. Design time Data test
2. Runtime data test at module level
3. Test data runs after completion using dummy data
4. Crash test for testing data safety.
5. Demo runs with the data from the end user.
6. Performance test at the peak hours of work.

SYSTEM SECURITY MEASURES

Database/data security

Implementation of security at database level plays a major role in the implementation of security for the application. It has properly been maintained by defining a separate user id and password. This authentication prevents mal-intentional entry to the database.

User profiles & Access rights

After a user gains access to the application, the user is ability to perform certain actions is restricted. For example, users are allowed to add new records but not delete existing ones. Users are restricted to view the data online, but not produce printed reports of critical data. Thus, permission checking enabled to check the user's security profile to see whether that user has permission to perform a particular task.

The next step in security added in the application is an audit trial that logs all the significant actions taken by user within the application. This included logging in and out and executing any "secured object" within the application, field change auditing, that is, changes made to data records on a field-by-field basis.

Cost Estimation of the Project

The cost of a Project is estimated, keeping in account many factors like human efforts, recourses required, security and reliability provisions, size in KLOC (Kilo Lines of Codes), user interfaces, size of databases, integration, documentation and the types of reports or output produced.

In our approach to cost estimation of the system, we followed Constructive Cost Model (COCOMO) to estimate the total effort in terms of Programmers months or Persons-month. COCOMO model requires sizing information as

- Objects Points
- Function Points
- Lines of Source Code

We used Objects Points to estimate the total effort required in our project. The Object Point is an indirect software measure that is computed using counts of the number of

- Screens (at the user interface)
- Reports and
- Components likely to be required to build the application

Each Object instance (e.g. a screen or report) is classified into one of three complexity levels, i.e., Simple, Medium or Difficult, based on the number and source of the client and server data tables that are required to generate the screen or report and the number of views or report.

FUTURE SCOPE OF THE PROJECT

The application currently handles management of a Help Age care center by onlining the services relating to health care, general services, household products etc. for senior citizens. Other aspects relating to Bank and Insurance can also be integrated.

REFERENCES

The following books have been referred during the preparation of this project.

1. HTML & Java Script for Visual Learners
2. Java Script Bible 5th Edition
3. Beginning J2EE, Apache & MY SQL Web Development
4. JSP (Wrox Publication)
5. Software Engineering by Pankaj Jalote
6. Software Engineering by Roger S. Pressman