Project Name: **Helpers4U**

Project Member:

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Abstract:

This project is focused on how on-demand web services have disrupted majority of traditional industries. From the way we travel, eat, shop, and even date, all has undergone a tremendous change. So, why not our household chores and errands?

After all we all need an home service in our lives that can complete our household chores and run our errands in a jiffy. Before we understand the nitty gritty of on-demand home services apps, let us start from the basic at what exact services that it provides.

As the name suggests it serves as a platform where you can hire professionals for all your household chores at your fingertips. Like all other on-Demands it is inbuilt with all the essential functionality. Got a leakage issue at home, hire a plumber near your locality who will fix it in no time. Got issues with your AC, call an air conditioning expert who will fix your AC in just a matter of few minutes. Similarly, these apps help in fixing problems of carpentry, house cleanliness, home appliances, and all other household problems. The home service marketing niche in India is still in the developing stage. With Indian cities seeing a significant growth.

INTRODUCTION:

Home Services app is the new trend in the market of on-Demand applications. With proper market research, inclusion of vital features, followed by appropriate marketing can make the app successful. The demand for Home Services Application will be on a rise as we imagine we all want an Irona in our lives. The age-old canters are not going to cause you any worries anymore. The trusted home services application with professional and qualified personnel can repair and fix everything around your home in an efficient manner. Problems get accentuated with rapid urbanization, rising incomes and abundance of low-cost workers. People are constantly in a hurry and are willing to pay more to ensure a certain level of service. The only other option available when scouting for these handymen is to avail the services of inept search directories and run the risk of being bombarded by incessant calls. Moreover, with smart phone being the preferred gateway to these services for most people and with monumental growth in its penetration across the country. As the existing application "Urban Clap" is only available in metro cities, this application extends reach to all the cities across India. This Application also aims to implement contract based model to flats around the city as a add-on service to their apartments at a reasonable amount.

PROBLEM DEFINITION:

When someone need aid with small but major household tasks, the trouble arises when service skilled persons are unavailable or the trusted providers are impossible to find, who delivers consistently flawless service on instance. Our online system for household services provides the most expedient and annoys free way to get your domestic work done. Keeping that in sense our proposed system is basically a marketplace for household services and it is the platform where the rates were standardized and there is no necessitate haggling over prices. Several aspects like painting, pest control, home cleaning, plumbing, electrical works and carpentry services are involved in a system to provide happy and healthy home atmosphere in order to satisfy consumers We aim to help in providing optimal solutions to all your household troubles with more efficiency, ease and majorly, a delicate touch. A single click system describes booking highly skilled in-house professionals and gets your service done on time. Customers' overall willingness to pay is significantly and positively correlated with the expectation that fee-based services would be better, and with the belief that "pay for what you get" is the right thing to do.

OBJECTIVE:

- To reduce time
- Easily available best Vendors on one click
- Easy to use

EXISTING SYSTEM:

Urban Clap is an app – based service marketplace that connects customer to service professional. Their strategy is to connect more and more number of customers to use the platform of Urban Clap to make their life more easy and comfortable. With the rise in Nuclear families, Dual Career couples, the focus of customer is to spend quality time with their families whenever possible. Services at the door step at one click of the mouse is welcoming change accepted by customers today, giving rise to business model like Urban Clap, is here to stay for long time. However the success of these businesses is well dependent on how successfully Urban Clap can meet the expectations of its customers, reduce their pain and provide an overwhelming satisfaction to its customer base.

PROPOSED SYSTEM:

The proposed system consists of actors consisting of a worker and a client. The administrator has initial rights to access and modify the website, where it needs to login to do so. Then the administrator comes to the customer who wants to take advantage of our services, it has to be before the registration and login process. A client can upload a file describing the services if necessary. Once a request is made, it can forward it to the payment process and rate the customer service to confirm the service once the service is over. And in the worst case if customers are not satisfied with the service they can proceed with the return policy process. Finally a service provider that provides a service where they should also go through the registration and login process and proceed with the uploaded files and inform them to provide the service once the service is confirmed. Is done and when done after service.

Implementation Technologies:

1. Spring Boot:

Spring Boot is an open source, microservice-based Java web framework. The Spring Boot framework creates a fully production-ready environment that is completely configurable using its prebuilt code within its codebase. The microservice architecture provides developers with a fully enclosed application, including embedded application servers.

Spring enables you to build applications from “plain old Java objects” (POJOs) and to apply enterprise services non-invasively to POJOs. This capability applies to the Java SE programming model and to full and partial Java EE.

1.1 Features of Spring Boot Framework:

1. Standalone Application

Can simply build the application jar and run the application with no need to customize the deployment.

2. Embedded Servers

Comes with prebuilt Tomcat, Jetty and Undertow application servers that do not require further installation to use. This also provides faster more efficient deployments resulting to shorting restart times.

3. Auto Configurable

Spring and other 3rd party frameworks will be configured automatically.

4. Production-Like Features

Health checks, metrics and externalized configurations.

5. Starter Dependencies

This will provide opinionated dependencies designed to simplify the build configuration. This also provides complete build tool flexibility (Maven and Gradle).

6. Properties Files

Spring Boot provides rich set of Application Properties. So, we can use that in properties file of our project. Properties file is used to set properties like: server-port = 8082 and many others. It helps to organize application properties.

7. Security

Spring Boot applications are spring bases web applications. So, it is secure by default with basic authentication on all HTTP endpoints. A rich set of Endpoints are available for develop a secure Spring Boot application.

1.2 Advantages of Spring Boot:

- Spring Framework can be employed on all architectural layers used in the development of web applications;
- Uses the very lightweight POJO model when writing classes;
- Allows you to freely link modules and easily test them;
- Supports declarative programming;
- Eliminates the need to independently create factory and singleton classes;
- Supports various configuration methods;
- Provides middleware-level service.

2. The Hibernate

Hibernate is an ORM (Object Relational Mapper) tool that is used for interacting with different kinds of databases. For example if you want to connect to a certain database using plain old jdbc let's say oracle, then in that case you would have to write separate code for connecting to the database moreover you would have to also specify the database driver to use and also the database driver should be installed in your system. Spring framework takes care of such dependencies by using dependency injection. Hibernate is a framework that allows you to write code that is independent of the underlying database and by independent what I mean to say is that it doesn't matter whether you are running an Oracle database or a MySQL database, the code will be exactly same and moreover ORM tools like Hibernate allow you to perform operations on database without the need to write query. Also ORM tools allow you to use your bean class or so called Pojo classes to create tables or relation in the database. So if you just define the class in your code the Hibernate framework is smart enough to create a table for that class in the database and map that particular class with its respective table or relation in the database.

2.1 MySQL

MySQL, the most popular Open Source SQL database management system, is developed, distributed, and supported by Oracle Corporation.

Features of MySQL:

- **MySQL is a database management system.**

  A database is a structured collection of data. It may be anything from a simple shopping list to a picture gallery or the vast amounts of information in a corporate network. To add, access, and process data stored in a computer database, you need a database management system such as MySQL Server. Since computers are very good at handling large amounts of data, database management systems play a central role in computing, as standalone utilities, or as parts of other applications.

- **MySQL databases are relational.**

  A relational database stores data in separate tables rather than putting all the data in one big storeroom. The database structures are organized into physical files optimized for speed. The

logical model, with objects such as databases, tables, views, rows, and columns, offers a flexible programming environment.

- **MySQL software is Open Source.**

  Open Source means that it is possible for anyone to use and modify the software. Anybody can download the MySQL software from the Internet and use it without paying anything.

- **The MySQL Database Server is very fast, reliable, scalable, and easy to use.**

  MySQL Server was originally developed to handle large databases much faster than existing solutions and has been successfully used in highly demanding production environments for several years. Although under constant development, MySQL Server today offers a rich and useful set of functions. Its connectivity, speed, and security make MySQL Server highly suited for accessing databases on the Internet.

- **MySQL Server works in client/server or embedded systems.**

  The MySQL Database Software is a client/server system that consists of a multithreaded SQL server that supports different back ends, several different client programs and libraries, administrative tools, and a wide range of application programming interfaces (APIs

3. Hardware and Software Requirements (Minimum):

Hardware:

1. Intel i3 processor 6th generation or later / AMD Ryzen 200 2nd generation or later
2. 8 GB ddr3 ram.
3. Windows 10 Home edition or later.
4. 1 TB Data HDD Space
5. Data Connection 5 mbps

Software:

1. Eclipse 4.7 Oxygen
2. MySQL Workbench 8.0
3. Google Chrome version 99.0
4. Apache Tomcat Server 8.5
5. Maven Dependencies

4. ER Diagram:

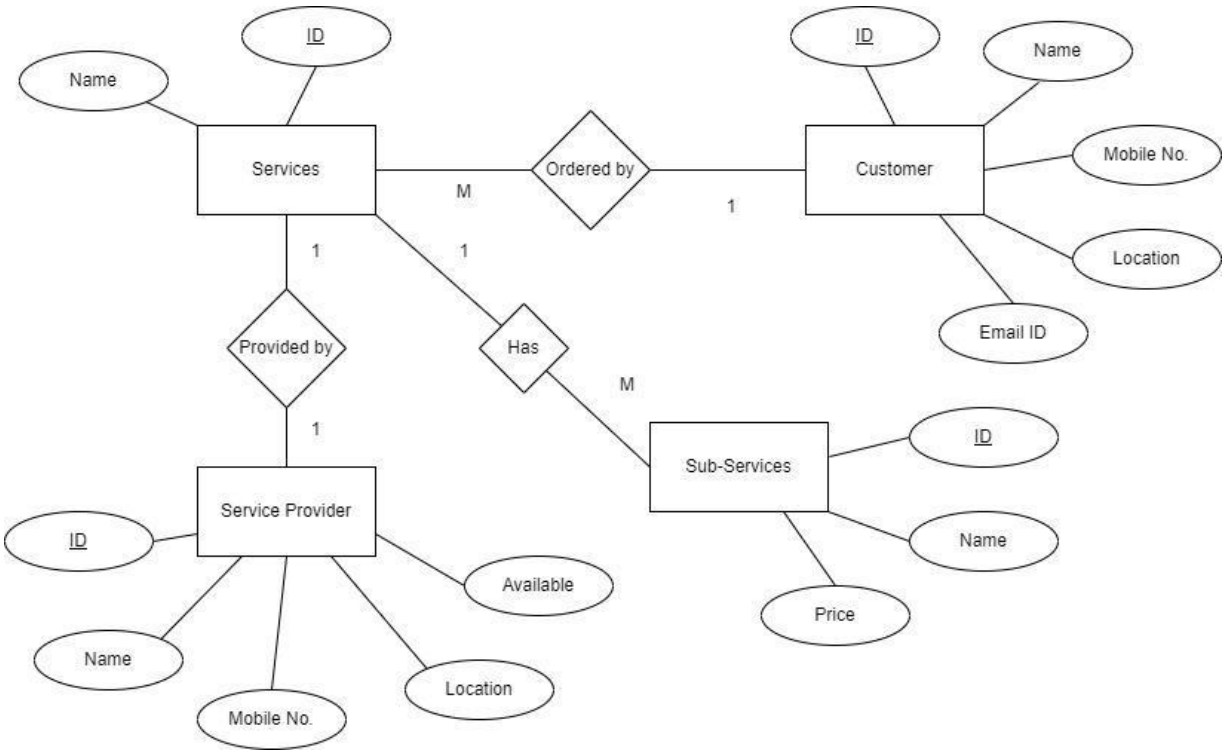


Figure 1: ER Diagram

5. Table Structures:

1. **Table name: user**

Column name	Type			
id	bigint	NO	PRI	auto_increment
email	varchar(45)	YES		
first_name	varchar(20)	YES		
last_name	varchar(20)	YES		
password	varchar(255)	YES		
type	varchar(255)	YES		

2. **Table name: Service Provider**

Column name	Type			
Id	bigint	NO	PRI	auto_increment
Name	varchar(50)	YES		
Password	varchar(10)	YES		
Experience	varchar(30)	YES		

3. **Table name: Servicesd**

Column name	Type			
service_id	int (11)	NO	PRI	auto_increment
service_email_id	varchar(100)	YES	MUL	
service_image	varchar(40)	YES		
service_name	varchar(100)	YES		
vendor_rating	varchar(100)	YES		

4. **Table name: subservices**

Column name	Type			
sub_service_id	bigint	NO	PRI	auto_increment
cost	int	YES	MUL	
description	varchar(255)	YES		
image	varchar(255)	YES		
service_email_id	varchar(255)	YES		
service_name	varchar(255)	YES		
sub_service_name	varchar(255)	YES		
vendor_service_id	bigint	YES		

5. **Table name: userorders**

Column name	Type			
id	bigint	NO	PRI	auto_increment
cost	int	YES		
description	varchar(255)	YES		
image	varchar(255)	YES		
order_id	bigint	YES		
service_email_id	varchar(255)	YES		
service_name	varchar(255)	YES		
sub_service_id	bigint	YES		
sub_service_name	varchar(255)	YES		
total_cost	bigint	YES		
vendor_service_id	bigint	YES		

6. UML Diagrams:

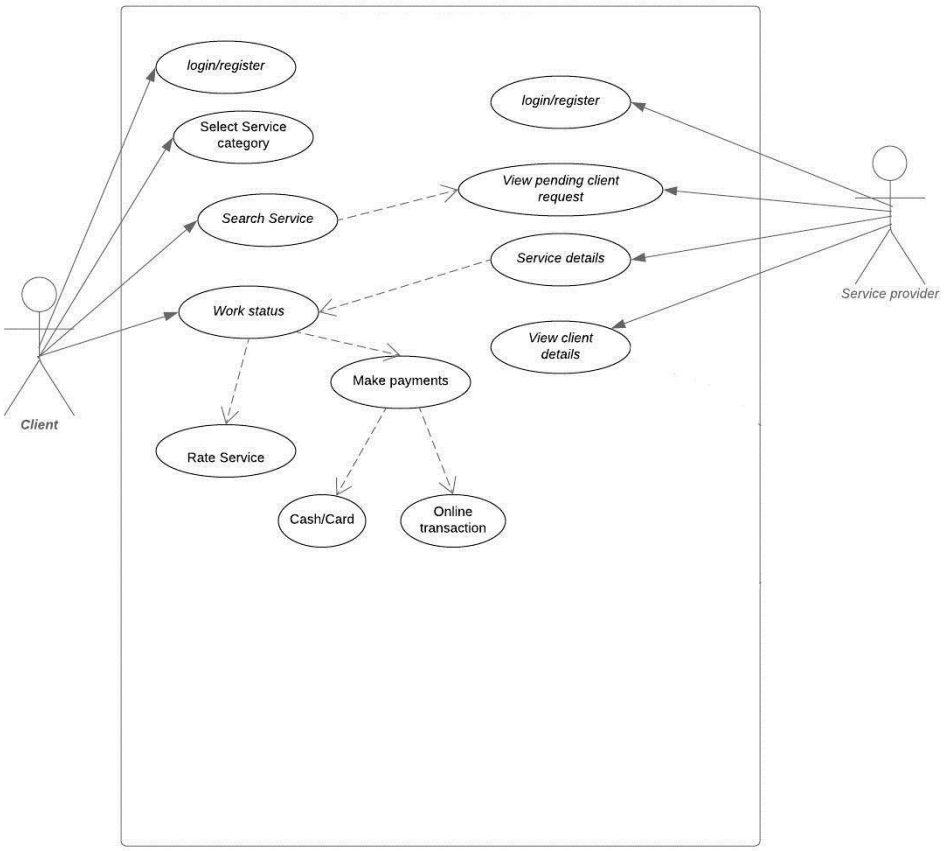


Figure 2: Use Case

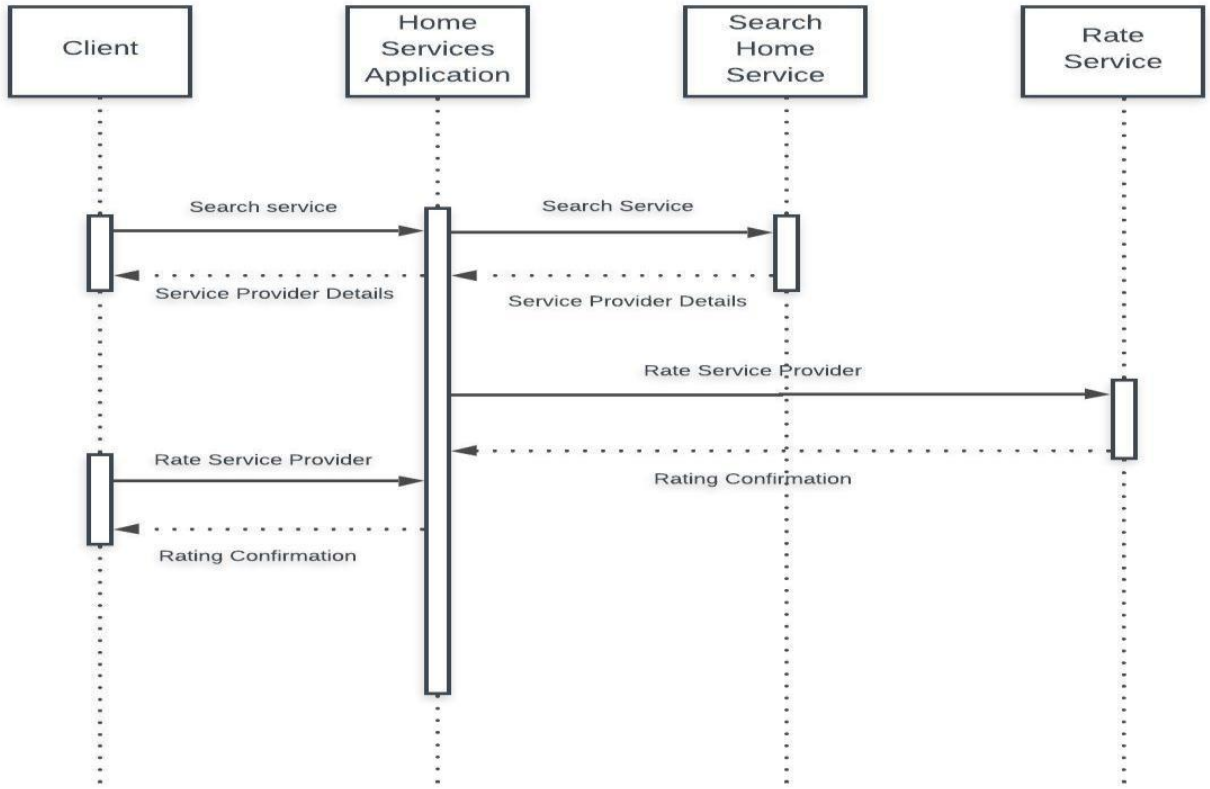


Figure 3: Sequence Diagram

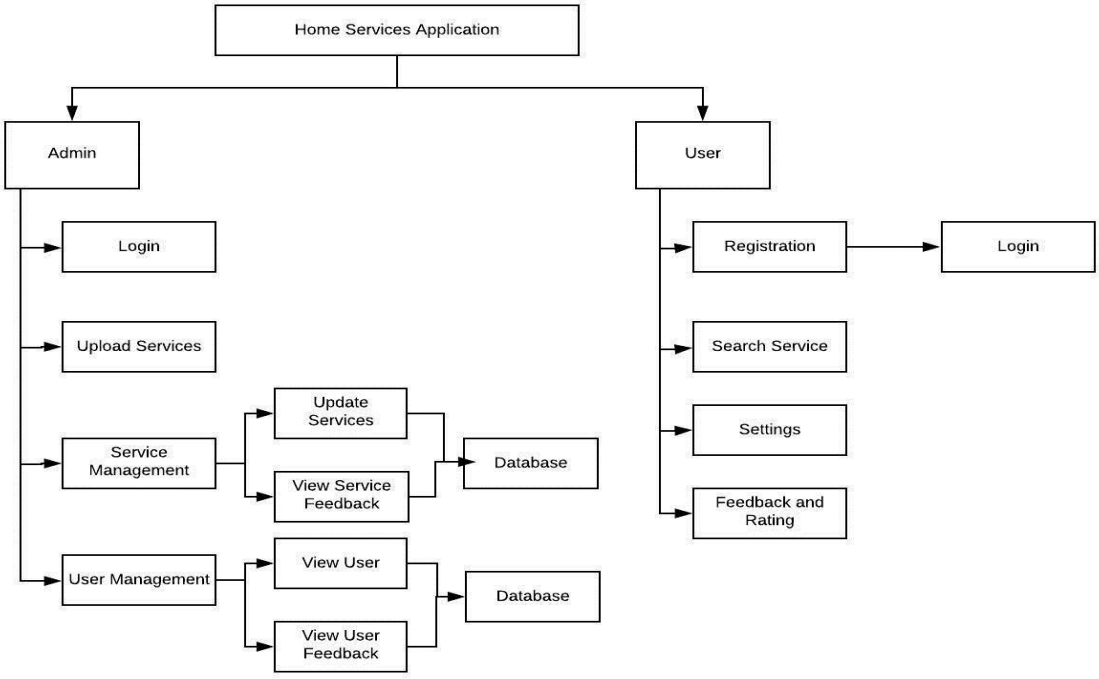


Figure 4: Modular Design Diagram

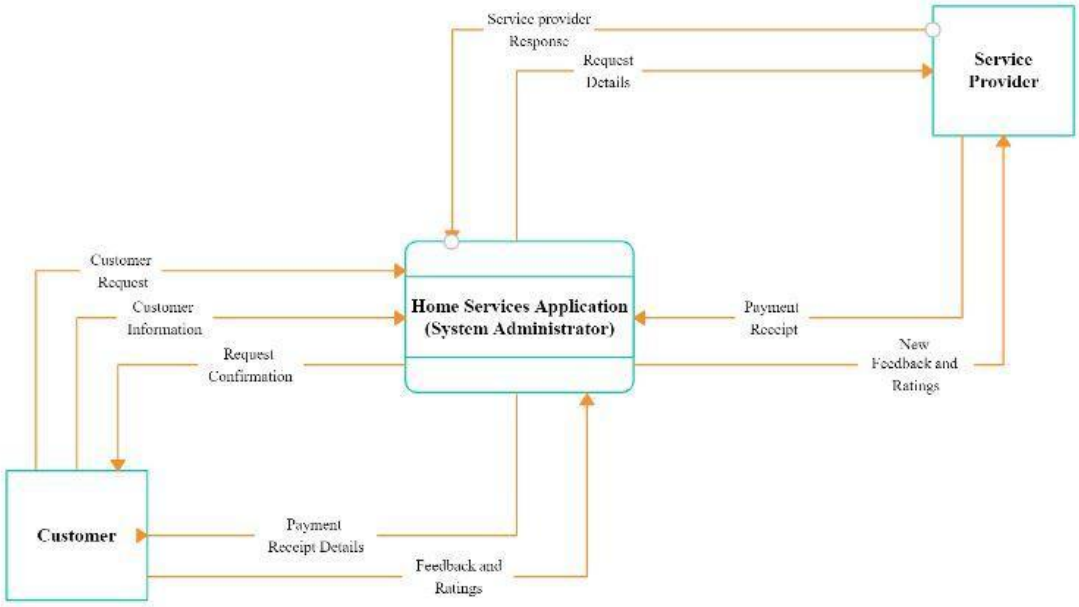


Figure 5: Level 0 Diagram

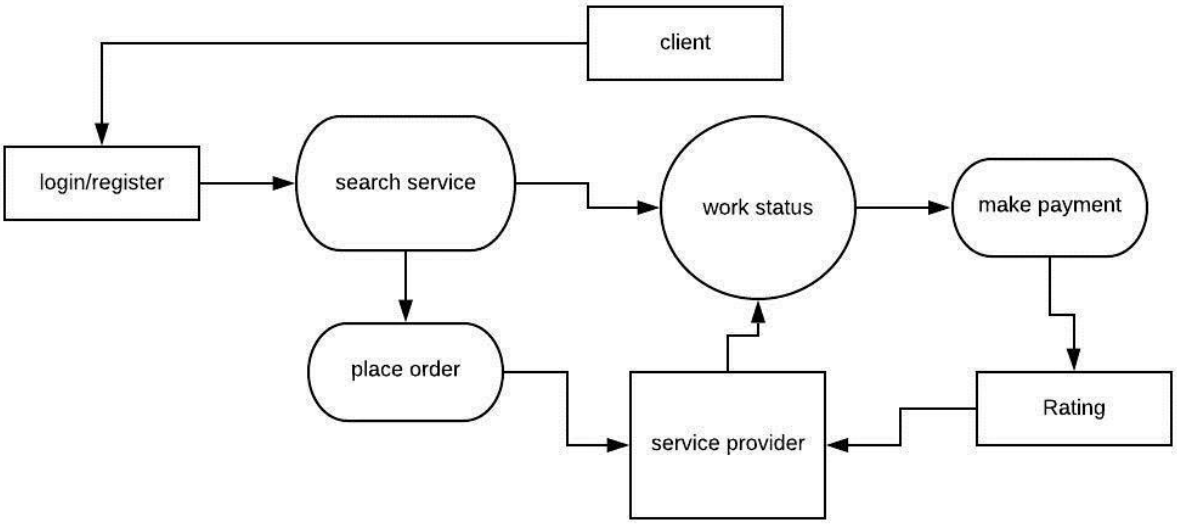


Figure 6: Level 1 Diagram

7. End to End Flow of Application:

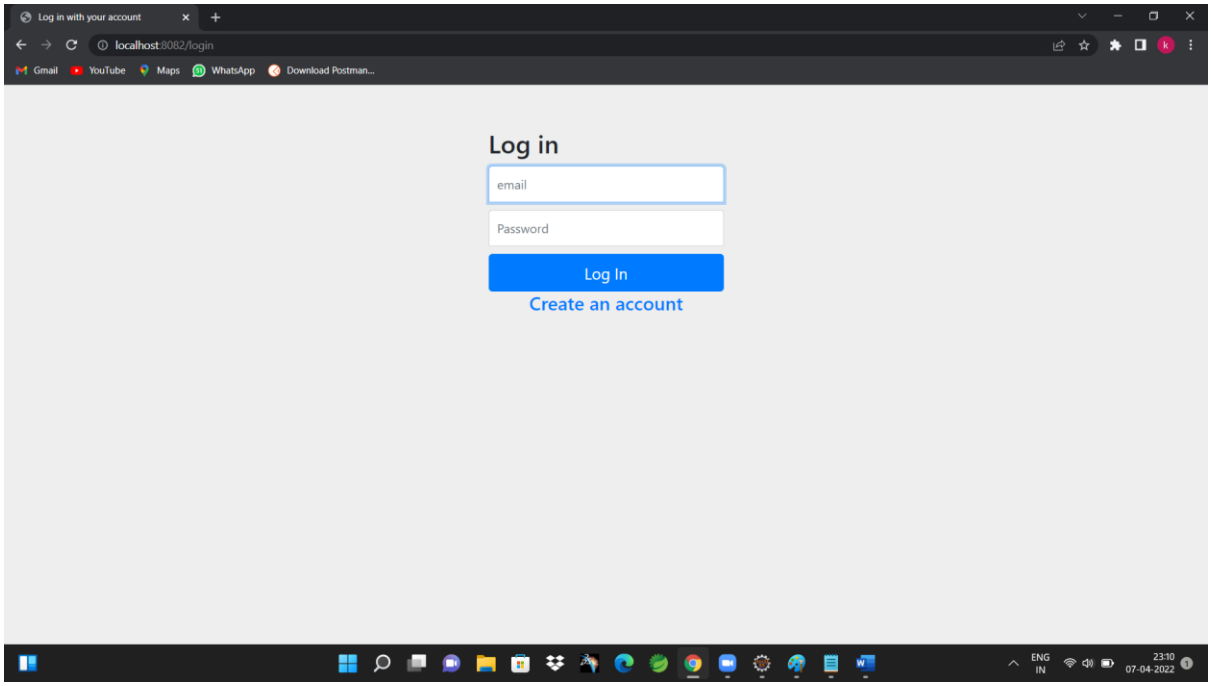
User:

i. User will login to the portal or will have to register if he is not a registered user.
ii. After registration User will login and Dashboard page will be displayed to him which will display the services and its status if any.
iii. From that page can User can click on the '**buy new service'** button and reach the services details page.
iv. In the services details page the User has to pick a category among the predefined sub-services and select the required sub services they needed.
v. A '**confirm service order'** will be displayed on the Website showing all the details of the service the chose.
vi. Then the user will have to make a payment about the service they chose and confirm the order.

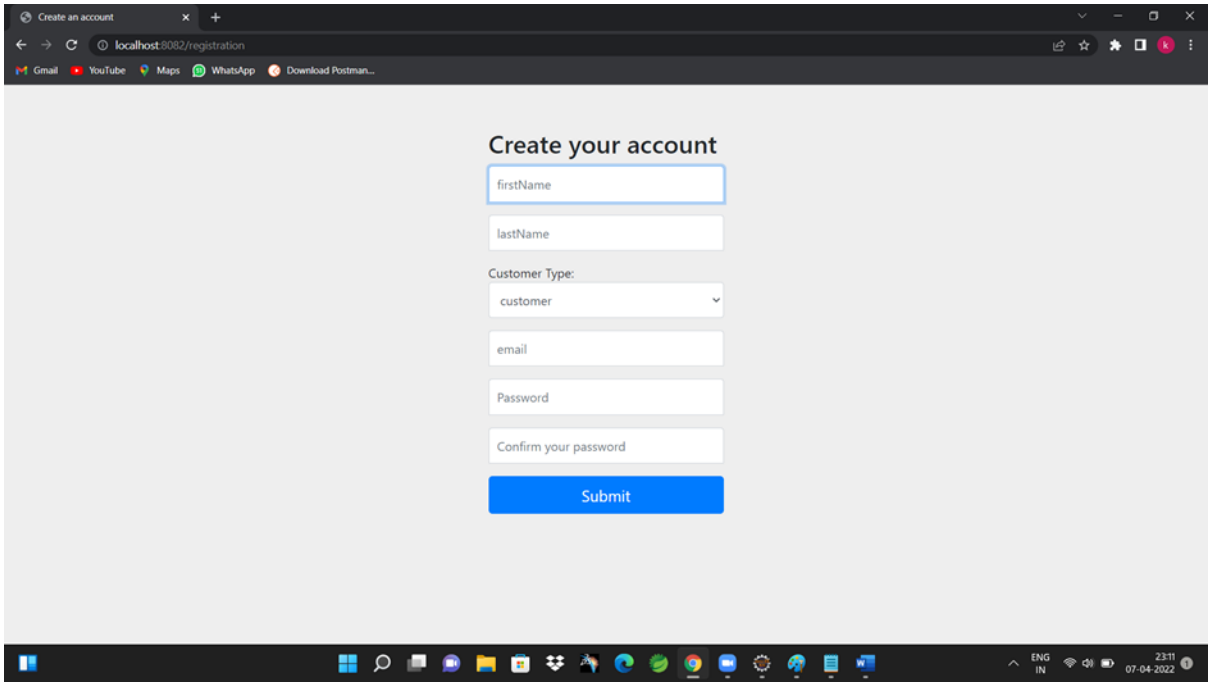
Service Provider:

i. Service Provider will login as Service Provider from the '**Service Provider login**' page and will be able to see his profile of services and sub-services by the Users of a particular area.
ii. Service Provider can Review the service order and after understanding it Service Provider will '**Receive'** the service order.
iii. It is the job of Service Provider to assign appropriate service person to resolve the matter at the hand as soon as possible.
iv. After conforming about the completion/resolving of the problem, Service Provider will check the status of the problem as '**Resolved '**and head over to the next service order if any.

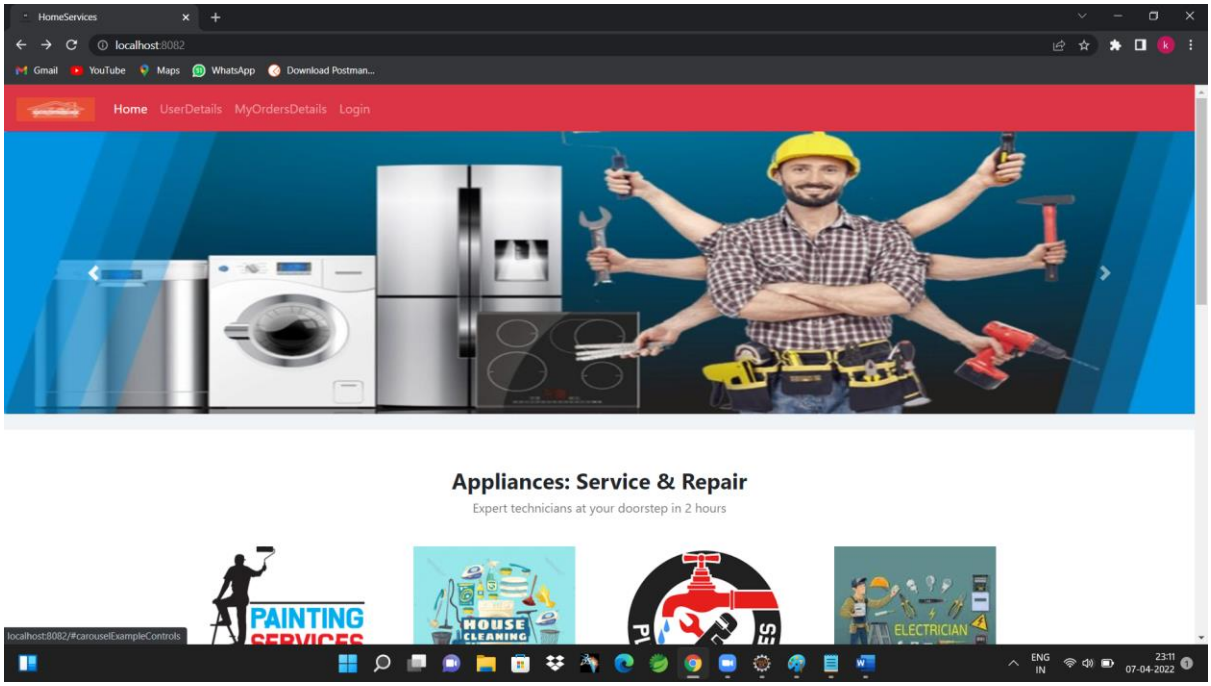
8. Screenshots of Webpages:



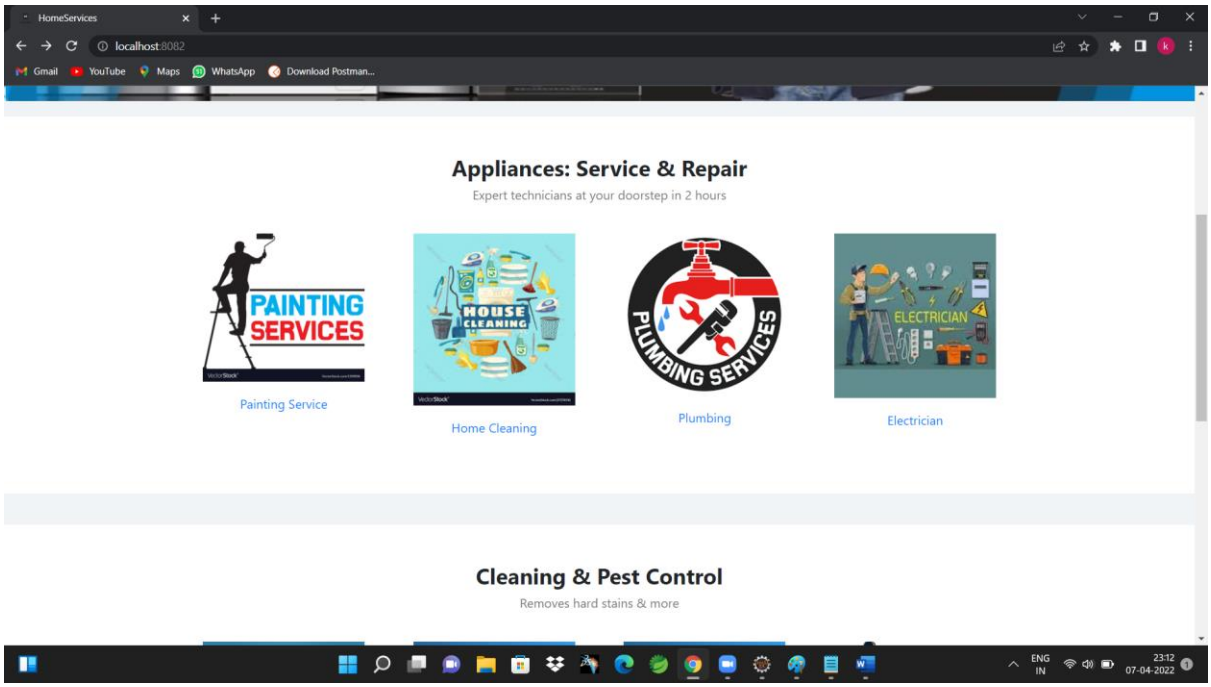
1. Login Page



2. Registration Page



3. Home Page



4. Services Page

9. Conclusion:

Home services are needed and the demand for services is increasing since the population in Asia is ageing. Nonetheless, old people are not the only group to benefit from home services, Other consumer groups are also going to benefit from new services also. Services have to be received either in person or unattended. As an example, social services have to be received in person but item deliveries can be done using reception systems. Unattended reception box is the most comfortable way to receive items for the customer. Unattended is also the most cost-effective reception model to logistician since many deliveries can be done at same time. According to the literature study and interviews, home services and delivery can be supported by many different elements of interest for building owner, developer/builder, inhabitant, haulier/logistician, service provider, employer and municipality. A closer look at stakeholder interests, the main interest for services found in literature and in interviews reveals three interesting focus points; new service, cost savings and influence on building image.

10. FUTURE ENHANCEMENT:

This application can be further enhanced by allowing the users of the application to drag and drop to another location on the maps. This facility can be used by the user in case if the user wants the service request to be accomplished at another location than his current location. For this there is a need to integrate the maps into this application. Another useful enhancement can be made by providing more service types to the user. Lastly, since this application is built only for the Android users, this application can also be implemented for other platform like iOS and Windows.

11. Bibliography:

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Thank You!