

SOFTWARE REQUIREMENT SPECIFICATION

(SRS)

1. Introduction

This section gives a scope description and overview of everything included in document. Also, the purpose of this document is described.

1.1 PURPOSE

The purpose of this document is to provide a detailed description of the requirements of “HOME AMAZE” software. The primary aim of the project is to develop a system that provides a platform where users can find and hire service professionals for the services required for refurbishment of a property. This document will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli.

1.2 SCOPE

The “HOME AMAZE” software is an online home makeover application which provides the users an ease in finding the best service provider to fulfil the necessary requirements for the refurbishment of a property. This software can also be used by service providers as an application which provides them work opportunities based on their experience and qualities.

The users will register and login into the application and classify themselves as a customer (who receive the service) or a servitor (service provider). User would also provide the location and choose the required service. Based on which the customer will be provided with a directory of service providers along with their specialities, achievements and experiences. Customer and servitor can communicate with each other using the chat feature provided in the application. After the successful completion of the project an E-Receipt will be generated and the customer will provide their reviews from their experience with the servitor. Further, it also provides the user to track the status of their project. The history will also be stored which the user can view from their profile panel.

1.3 DEFINITIONS, ACRONYMS, ABBREVIATIONS

- OTP- One Time Password
- HTML- Hyper-Text Mark-up Language
- HTTP – Hyper-Text Transfer Protocol
- TCP/IP – Transmission control Protocol/ Internet Protocol

1.4 REFERENCES

<https://krazytech.com/projects/sample-software-requirements-specificationsrs-report-airline-database>

1.5 OVERVIEW

The rest of the SRS document describes various system requirements, interfaces, features and functionalities in detail.

2 THE OVERALL DESCRIPTION

This section will give the overview of the whole system. This section basically describes the software's principal functions. The system will be explained in context to show how the system interacts with other systems and description of this section would cover the system interfaces, hardware and network interfaces, system memory demands and site specific requirements. It will also describe the type of stakeholders that will use the system and what type of functionalities are available to them. At last, the description with limitations that affect the software's development will be presented. These constraints might include hardware requirements, reliability plus security elements, auditing requirements etc.

2.1 PRODUCT PERSPECTIVE

The "HOME AMAZE" is an android based open source system with web service in order to find and hire service providers.

The system involves two end users that is customer (who will receive the service) and service provider (who will provide the service). System can be used by anyone who has an android based system. It provides a portal for the customers to find a suitable service provider.

A block diagram given below shows the major external interfaces.

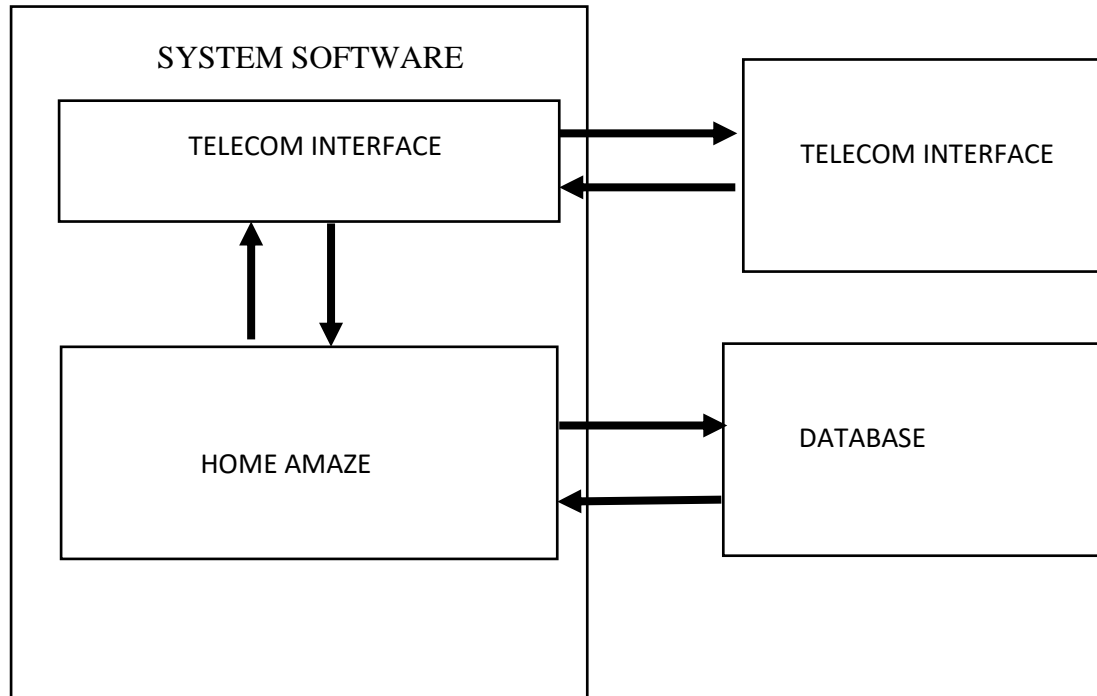


Figure 2 : Block Diagram

2.1.1 USER INTERFACE

User interface must be implemented using any tool or software package like java applets, MS Front Page, etc.

2.1.2 HARDWARE INTERFACE

Since the application may run over the internet, all the systems using this application may need to connect with internet and this will be a hardware interface, for example Modem, WAN, LAN, Ethernet, and Cross-Cable.

2.1.3 SOFTWARE INTERFACE

HomeAmaze app shall access the media files available in the system so that servitors can upload pictures of their works. The software is on server so it requires the support of scripting languages like PHP, Java and JavaScript. Also to handle a large number of users and user's related databases the software requires the help of database systems like MySQL, Firebase. The version of system's software shall be compatible to the application to make it accessible.

2.1.4 COMMUNICATION INTERFACE

The "HomeAmaze" system shall use the HTTP protocol for communication over the internet and TCP/IP protocol suite shall be used for intranet communication.

2.2 PRODUCT FUNCTIONS

The user must enter a valid username and password to login into the application. If the user is new to the application (i.e. first time users), then the user has to create a profile or register in order to store their data. If the user forgets the password, an OTP will be sent on the registered mobile number. The user can enter the sent OTP and they will be directed to a page where they can set a new password. An error message will be displayed if the user enters the wrong credentials or if they are not registered.

As soon as the user logs-in to the application, system loads the required components and creates space on the local system. The application will require permission to send notifications and storage permission of the system. It will also require permission to access media files in case user wants to share any media file. Then the customer can view, search and book servitors on the basis of their requirements. Customer and service provider can discuss about the service needs and requirements through the chat function and can confirm their deal. After the completion of project an E-receipt will be generated which the user can download for any future reference.

2.3 USER CHARACTERISTICS

End- users must have the knowledge of smart phones and must be familiar with English language.

2.4 CONSTRAINTS

A full internet connection is a main constraint for the application. Since, an online chat option will also be provided to the users, it requires an internet connection for the application to function.

3 SPECIFIC REQUIREMENTS

3.1.1 USER INTERFACE

The user interface for the software shall be compatible to any browser such as Google Chrome, Opera or Mozilla Firefox by which user can access to the system. The user interface shall be implemented using any tool or software package like Java Applet, MS Front Page, etc.

3.1.2 HARDWARE INTERFACE

Hardware shall be connected to the internet since the application would run over the internet. For e.g. Modem, WAN, LAN, Ethernet Cross-Cable. Hardware requirement for the software is a mobile with android based system.

3.1.3 SOFTWARE INTERFACE

This includes the embedded software that will be used in supporting the various functions of the system.

- Operating system- Android
- Firebase or SQL for DBMS database
- Platform- Java, PHP, HTML

3.1.4 COMMUNICATION INTERFACE

As communication takes place over the internet, HTTP protocol and TCP/IP protocol suite shall be used for intranet communication for sharing pictures and documents over the application.

3.2 FUNCTIONS

Software provides the following functionalities:-

- **Register**

The user will have to register themselves by setting a username and password. Along with this, the user is supposed to enter their phone number which will be used for OTP authentication.

There are two different types of users:-

1. Service Provider- User has to provide details about their name, age, occupation, state, district, Aadhar card number, specialities, achievements and available working slots.
2. Customer/Receiver of service- User has to provide just the basic details of registration.

After this, an account will be created of the respective user with their details.

- **Login**

The user will have to enter their username and password to login into their account. In case user forgets their password, they can reset the password after successful OTP authentication. If the user failed to enter the correct OTP an error message will be displayed.

- **Search for services/servitors**

1. The customer can search for required service by choosing the service name and city. According to which a directory of related service providers will be displayed along with their details which includes servitor's name, specialities, previous work details and achievements.
2. The customer can also search for the servitor by entering servitor's username.

- **Unlock discussion panel and Chat**

The customer can send a communication request to the servitor.

1. If servitor accepts the request, they can discuss about the service requirements via chat and can also share contacts if required.
2. The request will be declined if the servitor is not available or if servitor did not reply within 7 days.

- **Deal confirmation**

If the customer and servitor are comfortable with the requirements and terms, they can confirm the deal. A project Id will be sent to both and the servitor will have to enter the decided date and time for the execution of project.

- **Notification**

A notification will be sent to both the customer and servitor as a reminder with the Project Id.

- **Project Status**

User can keep track of their project or request status which can be any one of the following:

1. Communication Request Accepted
2. Communication Request Declined
3. Communication Request Pending
4. Deal Confirmed
5. Work in Progress
6. Project Completed

- **Receipt Generation**

1. After the successful completion of the project, servitor has to enter details about the project like

Name of customer, Project Id, Project site (where service was provided), Services provided, Contract period and terms, Pictures of work done and the Total price charged along with the cost of individual materials.

2. Once the servitor submits the details the E-receipt will be generated and sent to the intended customer.
3. These project details will also be added in the servitors profile as their previous works.

- **Reviews and Ratings**

Customer can provide their reviews and rate the servitor for their work.

3.3 PERFORMACE REQUIREMENTS

Response time: - The software shall take initial loading time depending on internet connection strength. When the customer books a service, they will get a reply as soon as the servitor responds.

Throughput:-The number of transactions or tasks is directly dependent on the number of users. The users may be service providers or the people who use the application for searching or booking the service provider.

Resource utilization:-The resources are modified according to the user requirements.

3.4 DESIGN CONSTRAINTS

- **Software languages used**

The languages that shall be used for coding the HOME AMAZE are Active Server pages (ASP), Java Servlets, HTML, Java Script and VBScript. For working on the coding phase of Home Amaze, the internet information services (IIS) Servers needs to be installed.

- **Development tools**

The system shall make use of the available Java Development Tool kits for working with Java Beans and Java Server Pages.

- **Class libraries**

System will make use of existing Java libraries available. Also, will develop new programs using ASP and scripting languages i.e. JavaScript and VBScript.

3.5 SOFTWARE SYSTEM ATTRIBUTES

System attribute requirements such as those for performance, security, modifiability, reliability and usability have a significant influence on the software architecture of a system. There are a number of quality attributes of software that can serve as requirements.

3.5.1 SAFETY AND SECURITY CONSTRAINTS

The system shall use a secured database

The system shall be reliable to control the network security breaches

The system shall not leave any cookies on the user's mobile device.

The system shall automatically log out users after a period of inactivity.

3.5.2 USABILITY

Users with basic smartphone knowledge can easily use the application.

3.5.3 RELIABILITY

The backup of the database is continuously maintained and updated to reflect the most recent changes made by the service providers (i.e. updating their profile by adding their recent work's pictures and information) or customers (i.e. reviews and ratings given by customers).

3.5.4 AVAILABILITY

The system is available all the time to the user as an android application. It will provide real time information about the service providers, their details and work experiences.

3.5.5 PORTABILITY

"HomeAmaze" is a portable app which allows user to find and hire service providers by their respective systems. All the necessary data can be accessed by anyone with android based system.

3.6 CHANGE MANAGEMENT PROCESS

Additional requirements should be submitted to the group via email. The group then will come to a consensus on the additional requirements and the appropriate changes will be made.