Software Requirements Specifications
for
Urban Service System,
a web portal of service provider system.

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1. Introduction

Urban Service software 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 web based application successful. The demand for Home Service software will be on a rise as we imagine we all want all facilities in our lives. The age-old canters are not going to cause you any worries anymore. The trusted home services software 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.

The purpose is to develop a software for online service provider.

1.1 Purpose :

1. The purpose of this document is to unambiguously specify the software requirement for a web based application system .Software requirement specification (SRS) is documented to clearly identify the functional, non-functional and interface needs of the system. It also enlists the probable constraints and assumptions made in the functioning of online home service software. It gives an overview of the service to be provided and its interactions with customer and service provider.
2. Home service system providing the required service of the customer at their doorstep and help service prover by opening a new way of earning. The proposed system is a modern home service system where there are no agents, and customer can directly hire their required service provider. This application is for making easier to manage service provider details, customer details, order details, tender details , service details and payment details. In this system customer will get the service from different provider of this service under a roof. The customer don't have to have to worry about searching different websites of different company for beneficial home service. Customer can select a price range suitable for his/her home service. Customer can easily access the system by purchasing appropriate service. Customer and service provider can deal with any problem with the help of support team easily.

3. Intended audience for SRS involve stakeholders from customer or user side, system requirement developers, software project engineers who are developing and maintaining the system.

The achievable goal of this document are:

1. To detail the As IS and TO BE process.
2. Develop the document that becomes the input for the design document .
3. Develop the reference document for designer/s, developer/s and tester on
    - Marketing infrastructure of home service
    - Detail analysis of different types of service of different providers

1.2 Scope:

The main intention behind the project is to provide a web based application for quick booking service when they face necessity situations in their daily life. The proposed system consists of actors like admin, service provider and customer. The admin has initial rights to access and modify the website, where it needs to login to do so. Then the admin comes to the customer who wants to take advantage of these services, it has to be before the registration and login process. A customer can upload a file describing the services if necessary. The software product will allow customers to enter the name of their desired service. If the service is available, software generates list of service providers serve the service for the customer to choose from, otherwise it suggests names of services with similar service type. The software will not allow customers to choose service providers before entering service name to maintain authenticity. The software will allow registered service providers to participate . Once a request is made, it can forward it to the payment process and rate 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. The goal of this software is to give a platform to the customer to directly choose the services without facing the problems of any middle man. The system place a mediator between user(customer and service provider) and system when user request any kind of support/help.

1.The software products required for developing the software are:-

a. Report Generator b. Database

2. The software will have wide application in areas where authentic service provider are not available in close vicinity, or do not host a wide stock of services. The relevant benefits along with goals and objectives are as below:

a. Speedy provide of services in remote areas.
b. Delivering better services with guaranty.

c. Address the queries and grievances of end users via the helpline handled by helpdesk executive to provide useful service.

3. The software maintains consistency between higher and lower level specifications, e.g.: System Requirements Specifications.

1.3 Definitions, acronyms and abbreviation:

Term	Definition
Customer and Service provider	Any end user who has a valid id and password
Admin	Who has special privileges for managing the entire system
Helpdesk	A group of user who helps the customer to solve any issue
Web portal	A web based platform which host the entire Home Service System. It is managed by the admin/s.
UI	User Interface
DB	Database
ER Model	Entity-Relationship Model
DBMS	Database Management System
DFD	Data Flow diagram.

This document uses the following conventions

1.4 References:

- www.urbanclap.in
- www.github.com

Reference document name	Publishing organization	Publishing Year	Link
Software Requirement Specification.	Wikipedia	7 September 2018	https://en.wikipedia.org/wiki/Software_requirements_specification

IEEE 830-1998 - IEEE Recommended Practice for Software Requirements Specifications	IEEE STANDARDS ASSOCIATION	20th September 1998	https://standards.ieee.org/standard/830-1998.html

1.5 Overview:

- The rest of the SRS document consists of the description of the software, the actual purposes of the software, the constraints, interfaces, the system functionalities, and the demographic of the user base.
- The SRS is organized maintaining the standard SRS outline used in prototypes.
- The rest of the SRS is organized as follows: – Section 2 provides a brief overview of the system and lines out the core features contained in the system. It also shows the prerequisites required from the user for suitably using this site to its full potential. It also lists out the some simple constraints that has been placed on the system and also some assumptions that have been assumed. Section 3 expands on the information provided in the previous section and details out the functions of the system based on the requirements that the system is expected to deliver. Section 4 discusses the various non-functional requirements that are essential for the system.

2. Overall Description

2.1 Product Perspective

This project is focused on how on-demand apps 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 Irona in our lives who 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 nascent stage. With Indian cities seeing a significant growth.

Service Provider System is a generic and open source web based software and this not dependent any kind of product this product is totally independent and self-contained. Without any hustle customer can choose the service according to his convenience. This product needs to store the data. For that, a database will be used. The web portal will communicate with a database. The web portal will add and modify data. All of the database communication will go over the Internet.

This software provides a holistic view of the processes involved in delivery of input followed by different customer with respect to the different service of various service provider managed by the administrator of the system for a better decision making and delivery.

2.1.1 System Interfaces

The Service Provider System has three active actors and one co-operating system. The Customer, Service provider, Help Desk and System Administrator and Payment Service Provider are connected with the online system through the internet.

2.1.2 User Interfaces

A. UI for default home screen with many options
B. UI for browsing service
C. UI for new registration
D. UI for login authentication
E. UI for add /update Service info
F. UI for add /update profile info
G. UI for book a service
H. UI for book a tender
I. UI for payment purpose
J. UI for refund claim purpose
K. UI for feedback purpose
L. UI for asking support/help
M. Chatting window for user with support team members

2.1.3 Hardware Interfaces

The system must run over the internet, all the hardware are required to connect internet, will be hardware interface for the system. As for e.g. Modem, WAN-LAN, Ethernet Cross-Cable. Suitable for devices with screen width greater than 720px. Landscape Layout Mode is used to develop the page. Minimum requirements for smooth functioning will be a Dual Core processor with 512MB of RAM.

2.1.4 Software Interfaces

The system is on server so it requires the any scripting language like PHP, HTML, CSS, JavaScript etc. The system require Data Base also for the store the any transaction of the system

like MYSQL, Firebase etc. system also require DNS(domain name space) for the naming on the internet. At the last user need web browser for interact with the system.

ES5 and above Compatible Browsers :

Microsoft Edge 18 and above, Mozilla Firefox 67 and above, Google Chrome 75 and above, Opera 62 and above, Safari 12.1 and above, Not compatible with Internet Explorer.

2.1.5 Communication Interfaces

NIL

2.1.6 Memory Interfaces

Memory constraints are Minimum because it's a web based application. Maximum 10MB of free space for cached data storage by browser in Secondary Memory.

2.1.7 Operation Interfaces

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 some data 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.

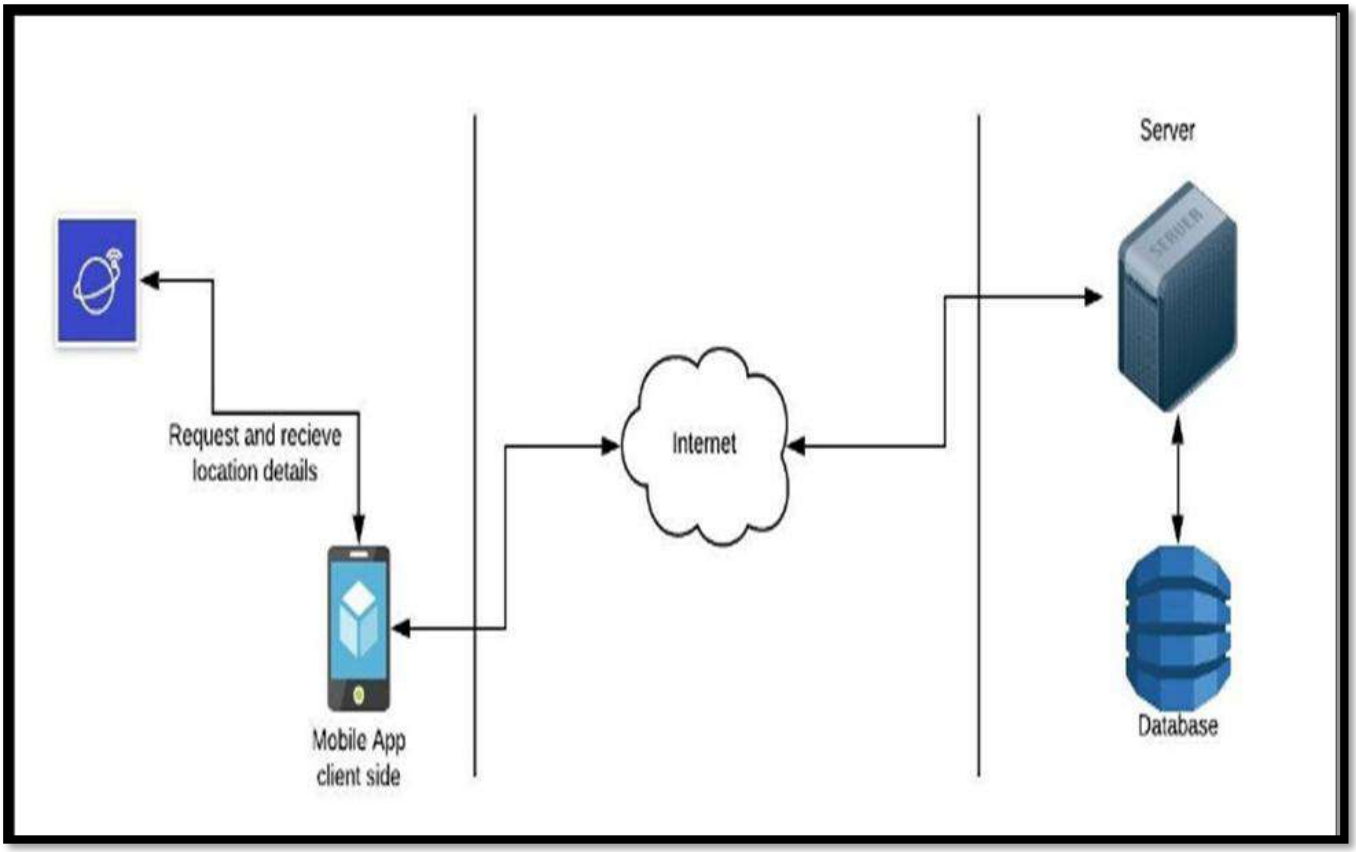

Figure represents architectural design of the system where the mobile application which is connected to the server and further connected to the database via mobile internet connection. Here the user initiated operations are:

A. User can browse insurance.
B. Existing users can login onto the system.
C. New user can register into the system.
D. A logged in user can book any service and tender.
E. A logged in user can cancel any booked service.
F. User can add/update their info and also can upload necessary documents.
G. User can make payment of the required amount through this portal.
H. User can ask for help from the support team.
I. User can claim refund if booking is cancelled.

Periods of interactive operations are:

A. User can browse any time, it doesn't depend whether the user is logged on or not.
B. There is no limitation on how much time a user can spent on this system.
C. There is a specific time allotted for filling up the new registration form, if a user cannot fill the form under the specific time instance he/she have to fill the form again.
D. In the time of booking a service user must have to give location and description at that time for proceed.
E. If a user ask for the support to the support team after granting the support the user must have to respond between 2-3 days, otherwise the request will be cancelled automatically.

F. If a user claim for his/her refund then within 48 hours the help desk will contact with the customer directly. Here the system is not responsible for any decision.

Backup and recovery operations are:

A. In case any user forgets his/her password in the time of sign in, after the user request for change his/her password. System will send a OTP on his/her registered e-mail address, by providing the particular OTP he/she can set new password for sign in.

B. The system will backup users order details in the cloud database at the time of booking with the help of users registered email. So that in case the customer lost his/her order details the system can recover the important data from database.

2.2 Product Functions

- **Login**
- **Registration**
- **Update Profile**
- **View services**
- **Search services**
- **Filter**
- **Book a service**
- **Call for a tender**
- **Cancel order**
- **Payment**
- **Update service details**
- **Bid for Tender**
- **Get payment**
- **Refund**
- **Provide cost and work location**
- **User Authentication**
- **Update service list**
- **Produce report**
- **Manage user**
- **Manage customer & service provider**
- **Manage System**
- **Log out**
- **Rating**

2.3 User Characteristics

Customer need to have a minimum computer knowledge to operate system. do payments online and knowledge of insurance domain.

The support team members also need to know about the company policies in details, and

they must be computer literate to access the system otherwise they will not be able to help the customers to solve their problems.

The administrator/s have to be very efficient of using computer and internet to control whole system, the administrator should have a very clear understanding of the database because he has to manage every customer's order and take care of the system. The administrator/s also have to manage the support team and observe their activity strictly so the support team members do their work systematically. The administrator/s will be efficient enough to recover the system in case any emergency situation like "system collapse". It is the duty of the administrators to gather many service providers to the system. The administrators would know everything about all the details of policies and the design of the entire system.

2.4 Constraints

A. As the system is a web-based system. The users need a high speed or Moderate Internet speed-up is needed to access the system.

B. As the system is dependent on the banking system to purchase service. When the banking system fails then users cannot purchase any policy.

F. For security purpose the users have to login using their specific email address and password. After 5 wrong try a user will be blocked for 30 minutes.

G. For safety purpose at the time of user's new registration OTP will be sent on the registered mobile number and registered email address of the user for proper identification.

H. As the website is HTTPS certified so there is no question of non-reliability appears.

I. The database at the backend of the system is totally reliable.
There is no data redundancy and data inconsistency.

2.5 Assumptions and Dependencies

1. This is a modern design to provide services at customer's doorstep, the system itself working as an agent, system itself providing different service choices to the customer, and system will let the customer to compare between several services of several service providers, then only book a service.
2. Customer can generate password for himself/herself which must contain alphanumeric value of at least eight symbols. There must be one capital case letter, one small case letter, one number and one special symbol. There should not be any space.
3. Every scanned copy uploaded by the service provider must be in pdf format and the size is less than 512kb. If there is any image, then the image must be in jpg format and the size should be less than 512kb.
4. If a customer wants the support of the supporting team he/she must generate a request. After few minutes a chat box will be appeared and the customer can interact with the help desk team through chatting.

5. If the customer wants to make payment through credit card/debit card, then the customer will be redirected to the corresponding bank portal. After making the payment through the banking portal the customer will be redirected to the system portal. If the payment is correctly made the portal will generate a digital receipt which will be sent to the customer or else the payment will be cancelled.
6. Every service provider must provide the Diploma Certificate, Adhaar card number, Pan number, Bank details etc. It is the responsibility of the service provider to provide valid documents else he/she may not be allowed to join the company as a service provider. Now the data provided by the service provider is checked by the company and the company decides whether he/she will be granted or not. The system is not responsible for granting him/her. The company directly interacts with the service provider in this case.

7. The administrator manages which service provider will be assigned for a service requested by the customer and the admin always tries to assign the best service provider available at that time with respect to the rating of service providers.
8. There will be no cash on hand payment between customer and service provider every transaction must be done using the system.
9. The customer must have valid Bank Account and he/she must have Debit card/credit card/UPI/Phone Payee for book a service.
10. Other than browsing and new registration, the user needs to be logged in into the system for Book an order, add/update order, profile information, ask for support or for claim purpose.
11. The major actors (except customer) will have specific and mutually exclusive functions.
12. Only the admin can have access to the accounts report.
13. The customer care executive will, at a regular basis, address the suggestions/complaints from customer's end and contact them only if requests are authentic.
14. Feedback form details will be handled by the customer care executive and referred to service providers, if required.
15. Care is taken to retrieve entered data of the user in case timer runs out before payment is successful.
16. To discourage malpractices by service providers, registration is to be authorised before providing Login ID.
17. 2 No user, service provider, manager or customer care executive can have duplicate User IDs. This is because the software has a common login window which validates all the 4 major actors. However, they can have the same name, address and contact details while signing up for the first time, to facilitate the manager or customer care executive (or their family members) to be customers as well.
18. A manager/customer care executive should have different User ID and password while acting as a customer.

2.6 Apportioning of requirements

In the case that the project is delayed, there are some requirements that could be transferred to the next version of the application.

3. Specific Requirements

3.1. External Interfaces:

3.1.1 User Interfaces:

Not done till the release date.

3.1.2 Hardware Interfaces:

The Urban Service system is a web based system hence the hardware interfaces used along with system are internet enabled. Its means the hardware contains internet facilities, Wi-Fi facilities and LAN facilities. The hardwires must be internet framework enabled. Altogether we can say the hardware used is this system must internet efficient. The hardware must contain wireless Ethernet facilities.

3.1.3 Software interfaces:

Since the Wheeler Insurance System is a web based system we use some scripting language to develop the software interface.

A.

Language	HTML
Initial release	1993
Last release till date	5.3 (28 January 2021)
Website	www.w3.org/html/

B.

Language	JavaScript
Initial release	December 4, 1995
Last release till date	ECMAScript 2020/ June 2020
Website	https://developer.mozilla.org/en-US/docs/Web/JavaScript

C.

Language	Cascading Style Sheet
Initial release	December 17, 1996
Last release till date	CSS 2.1 : Level 2 Revision 1 (April 12, 2016)
Website	https://www.w3.org/TR/REC-C SS1/

D.

Language	PHP
Initial release	1995
Last release till date	8.0.2 / 4 February 2021

Website	https://secure.php.net/

E.

Language	MySQL
Initial release	23 May 1995
Last release till date	8.0.12 / 27 July 2018
Website	https://www.mysql.com/

F.

Host	Firebase
Initial release	April 2012
Website	https://firebase.google.com/

3.1.4 Communicational Interfaces:

CI-1: The security of a user must be consistent through the use of passwords.

CI-2: The Services System will communicate to the database through a wireless Ethernet system.

3.2. Functions

1. Browse: In this functionality customers can access all the premium services as per their requirement they can browse through multiple service and access offers. Customer and service provider both can find a option to register or log in to the system.

2. Login: This functionality enables a user to access user's own account in this system. By using an email and password which are set at the time of registration, users can log in into the system. Both service providers and customers can log in individually.

3. Registration: By this functionality a new user can register in this system. For the registration the users have to give his/her details as per company requirement. After a successful registration user can log in into the system and access all types of service.

4. Update Profile: This functionality enables the customer to add and update their personal details. This functionality provides a user interface to update, edit and delete permissible user details.

5. Book a service: This functionality provides an interface to the customer to book the desired service at doorstep. Customers can set their location and contact details at the time of booking.

6. View order status: Customer can view their ordered services whether it is accepted by the service provider or not.

7. Cancel request: This functionality provides the service provider an interface by which they can cancel services which are requested by the customer.

8. Call for a tender: Customers can call for a tender, which can be viewed by the service providers and they can bid for those.

9. View pending services: This is the interface where service providers can check their pending services, which they have accepted.

10. View/bid tender list: Service provider can check the entire offered tender, which is called by the customer. They can go for bidding the tender if they want.

11. View bid list: Customer can view bid list for his/her tender and accept a bid from that list.

12. Log out: This functionality enables a logged in customer and the service provider to logout form the system.

13. Payment: The user can pay the amount of the service through this functionality. A bill is generated if the payment is successful. The user can pay through net banking/debit card/credit card/Phone pay/UPI through this functionality.

14. Get Payment: Service provider get paid by the admin for the completed service.

15. Add services: Admin can add new services which can be viewed and booked by the customer.

3.3 Performance Requirements:

There is no performance requirement in this system because the server request and response is depended on the end user internet connection.

3.4 Software System Attributes:

There are a number of attributes of software that can serve as requirements. It is important that required attributes be specified so that their achievement can be objectively verified.

3.4.1 Reliability

The system provides storage of all databases on redundant computers with automatic switch over. The reliability of the overall program depends on the reliability of the separate components. The main pillar of reliability of the system is the backup of the database which

is continuously maintained and updated to reflect the most recent changes. Thus the overall stability of the system depends on the stability of container and its underlying operating system.

3.4.2 Availability

The system should be available at all times, meaning the user can access it using a web browser, only restricted by the down time of the server on which the system runs. In case of a of a hardware failure or database corruption, a replacement page will be shown. Also in case of a hardware failure or database corruption, backups of the database should be retrieved from the server and saved by the administrator. Then the service will be restarted. It means 24 X 7 availability.

3.4.3 Usability

Prioritize the important functions of the system based on usage patterns. The system has to keep track of the usage of each function so that we can find the functions which are called most frequently. Frequently used functions should be tested for usability, as should complex and critical functions. Once modules are prioritised the system can run more efficiently.

3.4.4 Security

System implemented on MVC architecture and maintains all the sessions for better security and performance. Online payment implements through payment gateways which used AES (Advanced Encryption Standard).

3.4.5 Maintainability

A commercial database is used for maintaining the database and the application server takes care of the site. In case of a failure, a re-initialization of the program will be done. Also the software design is being done with modularity in mind so that maintainability can be done efficiently.

3.4.6 Portability

The application is HTML and scripting language based. So The end-user part is fully portable and any system using any web browser should be able to use the features of the system, including any hardware platform that is available or will be available in the future. An end-user is use this system on any OS; either it is Windows or Linux. The system shall run on PC, Laptops, and PDA etc.

3.5. Organizing Specific Requirements

3.5.1. User Class

- **Customer/ End user**

1.The system shall validate the customers through login/signup. For first time users, the system asks for his/her city and personal information like name, contact number/email, password, address and profile will be created with the input information.

2.Customer can view all offers for his/her and can order a service.

3.The system asks the customer to select the name of the service. While the user is typing service name in the search pane, the system shall show suggestions for services.

4. The system shall allow the user to choose his/her desired service provider, which is basically a list of authorised service providers within the same city provided by the customer.

5. After customer selects service provider, the system ask customer to select date and time slot of that service provider in which customer want desired service.

6. Customer can call a tender and system ask customer to type service details briefly and to select last bid date and completion of service date.

7. After completion of bidding customer can choose one for his/her tender.

8.Then system will ask customer to select payment type (like: Credit card, Debit Card, UPI etc.).

9. After successful payment, customer will get auto generated invoice.

10. Customer can view all past orders.

11. Customer can cancel the order before one day of serving.

12.Customer can update his/her profile.

13. The system allows user to contact with helpdesk for query resolution and/or grievance redress.

14. Customer can rate the service provider.

15.Customer can log out from the system.

- **Service Provider**

1. The system shall validate the service provider through login/signup. For first time users, the system asks for his/her city and personal information like name, contact number/email, password, address and profile will be created with the input information's.

2. The system shall ask the service provider to enter/update the details (qualification, experience, services that he/she can provide, bank account details) of the currently available services decided by system.

4. Service provider can check his/her schedule and he/she can cancel any order request.

5. He/she can update their profile.

6. Service provider can bid for a tender and then system will ask to give information about duration of doing the task and expected payment for these tender.

7. Service provider can check bided tender status.

8. The system shall send a daily report to the service provider containing up to-date details of his providing service (name of service, quantity, payment details). Also system will payment each service provider in daily basic.

9. The system allows service provider to contact helpdesk for query resolution and/or grievance redress.

10. Service provider can log out from the system.

- **Admin**
  1. The system shall ask for authentication of the admin panel.
  2. The system shall allow the admin to generate a daily report on the order details. 3. Admin will pay the service provider in daily basic and refund money to customer for cancelling the order.
  4. Admin can update service list.
  5. Admin will produce total report about the system.

3.6 Additional Comments

● All the analysis and web information is latest till the date. The system analysis, cost analysis, market analysis, requirement analysis is valid to the date of this SRS document.

● This SRS document will help to create the web based Urban Service system.

● May be all the implementation details are not clearly stated here, that details will be clear during the time of implementation.

● The SRS may be modified later based on implementation requirements or as per client's requirement.

● The implementation of the system should follow this SRS document.

● After implementation it will go through α-testing, ß-testing and ϒ-testing.