Software Requirements Specification

Project-Phase No:01

Home Tools Rental

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# 1. Introduction

This section will provide an overview of everything included in the SRS document, with a list of abbreviations and definitions that is provided.

## 1.1 Purpose

The purpose of this document is to provide a detailed description of the requirements of “Home Tools Rental” (HTR) application. The Intended audience of this document includes the following: the user renting the tool, and the owner of the tool. Other intended audience includes the development team such as the requirements team, design team, and other members of the developing organization.

## 1.2 Scope

The owner of a power washing machine wanted to rent it to nearby neighbors to make up the amount of money spent on the tool, there came the idea of HTR which will allow the following functionalities online: search for tools up for rental, renting tools from nearby households, and make an account.

The HTR application is intended to cut the expense of buying tools, make a safe and reliable environment for neighbors to rent tools, and allow users to look for tools in an easy and reliable way.

## 1.3 Definitions, Acronyms, and Abbreviations

HTR **–** House tools rental.

User **–** The person who operate or interact directly with the product.

Renter **–** someone that has registered at least one tool for rent.

Rentee **–** someone that has the intention to rent a tool.

Customer - the person who pay for the product and usually (but not necessarily) decide the requirements.

Stakeholders - any person who benefits from the system and who is not a developer.

FAQs - frequently asked questions.

FR – functional requirement.

NFR – non-functional requirement.

GUI – graphical user interface.

## 1.4 References

-Software Engineering, Ian Sommerville, ,9th edition, Addison Wesley,2010.

-SRS example from 2010\_group2 provided by the supervisor.

-Course slides chapter 4(Requirement Engineering) and the chapter 4(SRS supplemented slides) provided by the supervisor.

## 1.5 Overview

Section 2 provides an overview and describe the product in more detail. Section 3 provides a very detailed description of the product with a complete list of the functionalities. Section 4 provides non-functional requirements. Section 5 provides team’s contributions and roles. Section 6 provides a summary of the SRS document.

# 2. General Description

This section will show the functionalities of the system. and It will talks about the system that will be used in the application, also shows the main group of the users that will use the system . At last, it will show the requirement for using the application.

## 2.1 Product Perspective

The HTR is an application system. The application is used by HTR members and the developers. The system provides a secure environment for all financial transactions and for the storing and retrieving of confidential member information.

## 2.2 Product Functions

The HTR allows customers to search the tools inventory provided by this application. To rent the tools, one must register as a member using the HTR. Upon becoming a member and logging into the HTR, the HTR provides the functionality for renting tools, modifying display tool information and account information.

## 2.3 User Characteristics

The main group of the users are members, a member is someone who has registered with HTR.

A member can search for tools, rent tools and offer tools for rental. these activities require no product training since the level of technical expertise and educational background of a member is unknown. The only skill needed by a member is knowing how to use an application.

## 2.4 General Constraints

The HTR will be developed mainly using java in which makes the application only works with android and windows devices.

## 2.5 Assumptions and Dependencies

The user should have access to internet, has an operating system that support java programs, and the user should understand English since it’s going to be our app’s language.

# 3. Specific Requirements

This section contains all of the functional and quality requirements of the system. It gives a detailed description of the system and all its features.

## 3.1 External Interface Requirements

### 3.1.1 User Interfaces

When the user opens our app the user should be greeted with the log-in page where he\she can log-in to his\her account or if the doesn’t have an account he\she can choose to make one through the option “not a Member yet?”, see Figure 1.

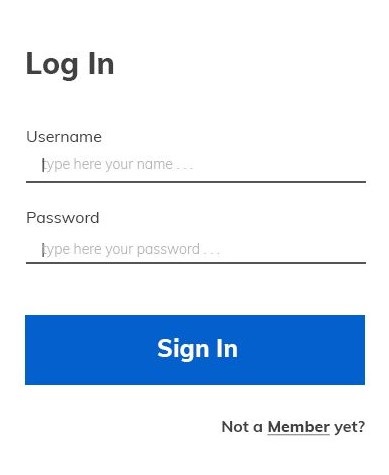
After logging in the user should be able to see the search page where he\she can enter the name of the tool he\she wants to rent, see Figure 2.

Also the user can look at his\her profile page where he\she can see his\her account information like: the username, the Email, and the phone number. also, he\she can see his\her offers and their status and a brief record of his\her rented tools, see Figure 3.

Also the user can access the “Create an offer” page where he\she can create a new offer and choose it’s characteristics like: the tool’s name, type, description, and it’s price per hour, see Figure 4.

صورة تحتوي على نص

تم إنشاء الوصف تلقائياًصورة تحتوي على منضدة

تم إنشاء الوصف تلقائياً

**Figure 1 - Log-in page Figure 2 - Search page Figure 3 - Profile page**

صورة تحتوي على نص

تم إنشاء الوصف تلقائياً

**Figure 4 – Offer creation page**

### 3.1.2 Hardware Interfaces

Since our system is entirely software implemented and doesn’t have any hardware parts we don’t have a hardware interface.

### 3.1.3 Software Interfaces

The system will communicate with the database in order to store and get when needed; all the accounts information, offers made, and renting records.

## 3.2 Functional Requirements

### 3.2.1 <FR#1>

**Function:** The ability to create an account.  
**Description:** The system shall ask the user to enter his email, username, password, address, mobile number, and the user can choose to provide the credit card number. Then the system shall create an account with the information that the user has entered.   
**Inputs:** Email, username, password, address, mobile number, and credit card number (optional). **Source:** User inputs, to store the information in the database. **Outputs:** On successful registration an account shall be created. On an unsuccessful registration the user shall be given an error message and prompted to retry the registration process. **Destination:** The information shall be stored in the database. **Requirements:** Access to the database, to check for reoccurrences of the user’s inputs (email, username, mobile number).  
**Pre-conditions:** N/A. **Post-conditions:** N/A.

### 3.2.2 <FR#2>

**Function:** The ability to search for tools that are up for rental.  
**Description:** The system shall ask the user to enter the tool’s type/name. Then the system shall search for the entered data in the data base then the system shall display the results.  
**Inputs:** Tool’s type/name. **Source:** User inputs, to search for the information in database. **Outputs:** the search results. **Destination:** N/A. **Requirements:** Access to the database, to search for the entered data. **Pre-conditions:** Check for any available tools in the database. **Post-conditions:** N/A.

### 3.2.3 <FR#3>

**Function:** The ability to offer tools up for rental.  
**Description:** The system shall ask the user to enter the tool’s name, type, description, and price per hour. Then the system shall create a new offer and store it in the database.  
**Inputs:** Tool’s name, type, description, and price per hour. **Source:** User inputs, to store the offer in the database. **Outputs:** If the user entered the required information the system shall create an offer. Otherwise the user shall be given an error message.  
**Destination:** The offer shall be stored in the database. **Requirements:** Access to the database, to store the newly created offer. **Pre-conditions:** N/A. **Post-conditions:** N/A.

### 3.2.4 <FR#4>

**Function:** The ability to rent a tool.  
**Description:** After using FR#2 (the ability to search for tools up for rental), the user will choose from the search results the wanted tool, Then the system shall make the tool unavailable for rental.  
**Inputs:** N/A. **Source:** N/A. **Outputs:** If the user rented the tool, this tool will be unavailable. **Destination:** N/A. **Requirements:** FR#2. **Pre-conditions:** Check for the availability of the chosen tool. **Post-conditions:** N/A.

### 3.2.5 <FR#5>

**Function:** The ability to modify account information  
**Description:** The system shall allow the user to modify the following: password, Credit card number, address, and mobile number. Then the system shall modify the account information.  
**Inputs:** Password, credit card number, address, and mobile number. **Source:** User inputs, to modify the account information. **Outputs:** The account information will be modified.  
**Destination:** The changes will be stored in the database. **Requirements:** Access to the database, to modify the account information. **Pre-conditions:** N/A. **Post-conditions:** N/A.

### 3.2.6 <FR#6>

**Function:** The ability to modify offered tools information.  
**Description:** The system shall let the user to choose from his offers and allow him to modify the chosen offer’s information.  
**Inputs:** Tool’s name, type, description, and price per hour. **Source:** User inputs, to modify the offer’s information. **Outputs:** The offer’s information will be modified.  
**Destination:** The changes will be stored in the database. **Requirements:** Access to the database, to modify offer’s information. **Pre-conditions:** the system shall check if the user have any offered tools. **Post-conditions:** N/A.

## 3.3 Non-Functional Requirements

**Security**: the system will make a random pin number and sends it to the user’s phone every time the user tries to rent a tool and then asks the user to enter the pin number, to make sure no one is using the account other then the owner of the account.

**Usability**: our system will have guiding tips throughout the system explaining how to use the system, to help the user with using the system.

**Reliability**: our system shall never lose the user’s data unless it is asked to, otherwise the user’s data shall never be lost.

**Performance**: our system will use fast data structures to ensure good performance.

**Supportability**: our system will support most credit cards no matter what bank the user comes from.

# 4. Team Members Contributions

In most of this document we worked together by asking each other for ideas and doing some brainstorming, but every member was assigned with specific sections that he was responsible for even if got some help in doing it in the end it was his responsibility, and here is a table of the team members and their contributions:

|  |  |
| --- | --- |
| **Team member** | **Contributions** |
| **Abdulmalik alsheddi** | *The organizer of all of the document, worked on 3 – 3.1 – 3.2 – 3.3 – 4 - 5* |
| **Mohamed Ghunaim** | *Worked on 1 - 1.1 – 1.2 – 1.5 - 3.2* |
| **Abdulaziz AlBarrak** | *Worked on 1.4 - 2.4 – 2.5* |
| **Abdulaziz AlOthman** | *Worked on 2 - 2.2 – 2.2 – 2.3* |

# 5. Conclusion

As a summary we showed you in this SRS document a brief introduction where we talked about the purpose of our system then we talked about the identity of our product and what will it do also we talked about Definitions and Acronyms that concern our system after that we ended our introduction by talking about our references and an overview that guided the rest of the SRS document.

Further on we gave you a general description on what are the factors that affect our product and it’s FRs after that we talked briefly about where our product stands amid other similar products, following we gave you a very general and broad idea on what shall our product do and what is its functionalities, then we talked about the users of our app and their characteristics, then we moved into the constraints that might limit us the developers.

On the third major section of our document we started getting into more details focusing on the FRs, and we started by talking about the interfaces and we showed you some prototypes of how we want our GUI to look like and we talked about the hardware and software interfaces, moving on we showed you our system’s FRs in a very detailed manor explaining every single FR, then we got into our system’s NFRs and we gave you a general idea about them.

We ended our document with the team members and explaining their roles in making this SRS document.