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# SOFTWARE REQUIREMENTS SPECIFICATION

for

**HoneyComb**  
(ONLINE RESOURCE SHARING PLATFORM)

Version 1.1

Prepared by : 1. Rahul Mahbubani (190001050)  
2. Rishabh Soni (190001052)  
3. Saket Kumar (190001054)

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# 1 Introduction

## 1.1 Purpose

This project is intended to provide a one stop solution for buying/renting of useful resources within the college premises. Usually, students find it difficult to gather resources such as books, drafters, etc. inside the campus. This web-app would provide a medium between those who want to buy/rent any entity and those who want to sell that entity. Further description about this web-application is provided in the Project Scope.

## 1.2 Intended Audience and Reading Suggestions

This SRS is for developers, project managers, users and testers. Further the discussion will provide all the internal, external, functional and also non-functional information about **ONLINE RESOURCE SHARING PLATFORM**.

## 1.3 Project Scope

This software is an interactive platform for buying, selling, and renting any students' resources within a college/university community. The web application's closure to the college community would provide a better platform for students to share their belongings. Students can sell or rent their notes, books, stationery, furniture, and much more.

Users are provided with an interactive experience where they can see advertisements of products posted by other users or can post one of their own. These advertisements would provide a major source for sustainability of this web application.

Options to buy, rent or wishlist a product are also provided.

With an ease of a click, this platform facilitates the student community in the following ways:

- Users can buy some commodity or find buyers for their belongings within the student community.
- Find useful resources such as books, notes, drafters, lab coats and a lot more, all at one place.
- Users can manage their profile, passwords, wish list, and posted ads.

App administrators can manage users and can activate/deactivate their profiles, to avoid spamming or mischievous activity. Security measures such as password hashing, email verification are also taken.

## 2 Overall Description

### 2.1 Product Perspective

It is a new self contained product built from scratch. Main goal of the project is to facilitate communication and minimize effort. The project is supposed to be open source, code repository of which is hosted on GitHub. The following are the main features that are included in this Online Resource Sharing Platform:

- User account: The application allows the user to create their accounts and provide features of updating and viewing profiles.
- Posting ADs: Users can post advertisement of their commodities they are wanting to sell.
- Smooth Browsing through Products: The application shall provide a user friendly experience for the users for browsing any product they wish to buy or rent. Various filters/categories shall be made available to the users.
- Search: This feature relies on a local search engine based on key words.
- Browsing Other Users' ADs: Any user would be able to browse through the products posted as ADs by other users.
- Contact Us section: Users would be able to contact the owners directly through the website. This would facilitate the user to provide his feedback and suggestions.
- Cross platform support: This application offers operating support for most of the known and commercial operating systems.
- Number of users being supported: The system is be able to support a large number of online users at a time.

### 2.2 User Classes and Characteristics

The web application has basically 3 types of users.

- Students
  - Seller
  - Buyer

- Administrators
- Official Staff

Students can play two roles - Sellers, who will put up their products for sale and Buyers, who will buy them.

## 2.3 Product Functions

The web application stores users' information and the products listed by the sellers for buying or renting. Also others features like wish list, order summary etc are also provided by the website.

Before using the main features of the application, users have to be registered.

- All users have - user\_id, user\_name, first\_name, last\_name, role, email, phone\_number, password\_hash, is\_active and last\_login fields.
- Each product has some data - product\_id, program\_name, description, seller(foreign key), prod\_image, price, category and status(sold or not).
- After a successful transaction, each transaction is recorded in the transaction table, which contains - transaction\_id, prod\_name (foreign key), prod\_id (foreign key), buyer (foreign key) and seller (foreign key).
- Wishlist table contains - id, user\_id (foreign key), prod\_id (foreign key). It stores information about wishlisted products by a user.
- Profile table will store some more information about a user such as user\_avatar, hostel\_address, gender, alternate\_contact.

All the above tables are accessible by the administrators, whereas, the official staff can only access user table, product table and transaction table.

Users can search for the products in the search bar provided. Also while browsing through the products, various filters are provided for a smooth and effective browsing experience.

## 2.4 Operating Environment

The website shall be operable on any web browser. It shall also be optimised for mobile devices, so will be operable on Android and iOS devices as well.

## 2.5 Design

Multiple webpages need to be created through which user can perform the specified tasks. The list of webpages is as follows:

- **Login Page**  
This is where the user will land immediately after opening the website. User will be successfully logged in after verifying his credentials.
- **Signup Page**  
The user creates an account on this page.
- **Home Page**  
This is where the user will be redirected after successfully logging in or signing up. Here, the user can see recently put up products by sellers, and can wishlist or buy/rent them.
- **Buy Page for an Individual Product**  
This page shows more details about individual products.
- **A Seller Profile for Each Seller**  
Each seller will have a seller page which a buyer can browse to see a list of products put up by that seller.
- **Buy Page**  
This page lists all the ads of the products listed by the sellers.
- **Sell Page**  
Sellers can post an ad for their product on this page.
- **Contact Us Page**  
This page allows end users to provide their valuable feedback or suggestions to the admin.
- **Wishlist Page**  
This page displays the products which were wishlisted by the user.
- **Your ADs Page**  
On this page, the user can see all the ads posted by him till date. He can also edit or delete the products. If he has sold a product, he can also mark it as sold.
- **Edit AD Page**  
This page allows sellers to edit the ADs posted by them.
- **Your Orders Page**  
The products bought/rented by the user are displayed here.
- **Profile Page**  
Here the user can view and edit his/her profile details.

A search bar shall be provided on the navigation menu, so that users can directly search through the products using keywords.

Tags can be used with products so as to provide better functionality with the search bar. Product categories can be created which will make it easier for the user to browse for the desired product.

## 3 System Features

This website is a buying, selling and rental platform, so the features of this website must be centered around enhancing user experience.

### 3.1 Description and Priority

The Online Resource Sharing Platform has features that are main and also some are subsidiary. But all the features are necessary for this software.

The features with priority top to bottom -

1. Product Buying/Selling: This is the main feature of this application.
2. Email Client: This will be required for an effective communication.
3. Search Bar and Filters: This will make browsing far more easier.
4. Product Wishlist: This will enhance user experience.

### 3.2 Technical Requirements

The resource sharing website is to be built on Django, HTML, CSS and MySQL.

Back-End - Django

Front-End - JavaScript, CSS, Bootstrap

Database - MySQL

### 3.3 Functional Requirements

Following are the functional requirements for the web-application:

- User should be able to register himself by filling up a form on the SignUp page.
- Email verification must be done once the user fills the registration form. And after a successful verification, he must be able to log into his account from the login page.
- A welcome email should be sent after successful registration.
- The homepage should contain recently added products and personalised recommendations for the user based on his past transactions and searches.

- On each product card, there should be a button to view detailed information about the product and another button to wishlist the product.
- An option to filter products either by category or by price should be provided in the interface.
- An option to sort products by price (both high to low and vice versa) should be made available in the browse product page.
- Each product shall have an individual page with a detailed description including its seller, price, magnified product image, category, tags and a tab for displaying seller profile info and link to profile page.
- Each seller will have a seller page which a buyer can browse to see a list of products put up by that seller.
- A search bar must be present in the navigation menu so that the user can search a product by entering a keyword.
- A user profile page should be there in which the user should be able to change his username, profile avatar, password, and details such as hostel address and phone number.
- There must be a 'your orders', 'your wishlist' and 'your ADs' page in which user can see his orders, wish list, and advertisements respectively.
- If a user clicks on 'buy now' button on any product, an email should be sent to the seller communicating him about the user who wants to buy that product. The seller then has a choice of selecting the user he wants to sell the commodity to.
- In the Contact Us page, there should be a form that the user can fill if he wishes to provide his feedback/suggestions.
- A secure payment gateway should be provided for transactions between seller and the buyer. The same shall also be used to accept payment from the seller for paid promotion of his products.
- Various links such as GitHub link for the project repository, company's official website link and company's social media handles shall be provided in the 'about us' page along with the detailed description about the owners of the company and their vision.



## **4 Other Nonfunctional Requirements**

### **4.1 Performance Requirements**

The system must be interactive and the delays involved must be less. The system should load and run within 2 seconds. Optimisation of code will be very important in order to reduce the time complexity of certain queries. The database should be normalized to prevent redundant data and improve performance. A reliable hosting service provider should be chosen for a good server performance.

### **4.2 Security Requirements**

The users need to get registered and verified before they can actually buy or sell commodities. An automated email client is set up for verification of new users.

Apart from that, storing passwords as it is could be a threat to user privacy. The admins should not be able to see a user's password. In order to incorporate that, password hashing is implemented. Also, the databases should be behind a firewall.

### **4.3 Software Quality Attributes**

In both development phase and testing phase, frequent conferences have to be held amongst developers and users to ensure that the quality of the software is maintained and all the requirements are fulfilled.

UI testing has to be done along with database and logical tests. It should be made sure that the UI is not buggy and a user shall not face any kind of problem browsing through it.

### **4.4 Business Rules**

This website is made for students to ease the process of sharing resources among themselves, so the ultimate goal is a nice and smooth user experience.

Basically the motto is to save time and energy in collecting useful things and getting rid of useless things.

## 5 Other Requirements

The website needs maintenance as it is a long process software. It will need re-factoring and further requirements can be changed as new features will be added from time to time.