

# Software Engineering Project Proposal

Length: approx. 3 pages per student

**Project Title:** Design and Implementation of a Website for Online Second-hand Shopping

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**Supervisor Name:** Ahmad Ibrahim

**Project Category/Topic:**

- Software Engineering

**Project Aim:**

- **In no more than three sentences, describe what you wish to achieve.**

This website is going to be a platform for users to buy, sell, or find anything in their community. A community where underused goods are redistributed to fill a new need, and become wanted again, where non-product assets such as space, skills and money are exchanged and traded in new ways that don't always require centralized institutions or 'middlemen'.

- **Significance and relevance: Why is the project important and how is it relevant to your chosen software engineering pathways? See the below paths.**

Software Development is a booming industry and offers me a career path with endless progression, and opportunities. By doing this project I will be familiar with the technologies needed to create a website from the ground up. Moreover, I am seeking to broaden my abilities horizontally in order to become full stack developers.

**Related work:**

- **List the most relevant work in the area (with the help of the supervisor).**

Requirements analysis: requirements elicitation, requirements analysis, requirements documentation.

Build a portfolio frontend using JavaScript, HTML, and CSS, including features like fonts, colors, drop-down menus, image sliders, shopping carts, search bars,

and product detail pages.

Build a backend, which is the data access layer that holds products, orders, and customer information. It will help the website operate by processing, storing, and transferring their data to and from the customer-facing side.

### **Project Objectives/Deliverables:**

- 4-6 concrete and measurable project objectives: you may wish to split the focus on the research and/or implementation contributions of your work. For guidance, you may follow one of the below pathways:
- **Pathway 1 - Software Development:**
- For each objective, a one-line description of how you measure successful delivery; this should tell us about your likely approach that you will take to evaluate your research and/or software product.

#### **Admin**

1. **View User Information:** The administrator shall be able to view all the users' information that completes the order form and the checkout process.
2. **Add/Update/Delete Shopping Items:** The administrator shall be able to add new items to the list of shopping items and to delete items from the main page of the shopping-cart application.

#### **User:**

1. **Login/ User Authentication:** The users shall login or register using the user authentication form.
  2. **Place Order :** The users shall place an order by completing the information in the order form.
  3. **Checkout Items:** The users shall be able to check out items only when there are items in the shopping cart.
  4. **View Categories and Items:** The users shall be able to see the home page and to view the different categories, select categories, browse through the items in each category, and add items to the shopping cart.
  5. **View Shopping Cart:** After browsing through and adding items to the shopping cart, the users should be able to view the items and to check out, to delete or continue shopping.
- **Explain why these objectives are sufficient to achieve your project aim.**
- The project is divided into fronted website and backend management system. For Admin, it is very convenient to add, delete, modify, enable / disable and other operations of shopping items. Besides, it is also simple to manage all the

user information. For Users, they can quickly browse and buy products, reduce many opportunities to contact with external unsafe factors, and reduce the consumption of human, financial and material resources. Moreover, the webpage design of the project's shopping website and backend management system is relatively simple, which is easy to be mastered by consumers and Admin users.

### Methodology:

- **Description of approach to solve the problem.**

Frontend: HTML, CSS, JavaScript, FreeMarker, Bootstrap, JQuery.

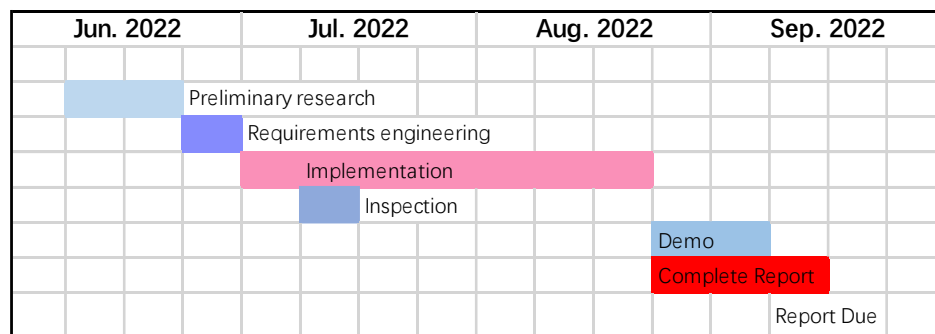
Backend: Mysql, Tomcat, Spring, Springboot, Maven

### Project plan:

- **Feasibility: Explain why your skills/expertise and the available resources are sufficient to complete the project in time.**

I have completed three modules related to software development and implementation, which are Java Workshop I, Java Workshop Full-Stack Application, and Software Engineering. These modules are sufficient for me to complete the project.

- **Gantt chart with tasks and milestones, reflecting the project objectives/deliverables.**



- **Explanation of Gantt chart**

06.13-06.20: Preliminary research.

06.21-07.01: Requirements engineering and architecture design.

07.01-08.25: Website development and implementation.

07.11-07.15: Project Inspection

08.29-09.02: Project Demonstration

08.25-09.12: Complete Project Report

### Risks and contingency plan:

- **What might happen that would prevent you from reaching the project**

### **objectives?**

The language of my system and the Website to be designed may use different language. Sometimes there will be APIs and Jar files were not provided in my OS language, and file encoding issues could arise and may stop my program running smoothly.

- **What are the particularly difficult aspects of the project which you are worried about completing?**

I am worrying of system breakdown and maybe some files will be lost.

- **What is your contingency plan if there are problems?**

Backup the files every day. If some files are lost, I could use the backup files.

### **Hardware/Software Resources**

- **What HW/SW resources will be required to complete the project?**

JDK1.8, IntelliJ idea, notepad++, and so on.

- **Does the student/supervisor have access to these resources?**

Yes.

### **Data**

- **What datasets (if any) are required to complete the project?**

No.

- **Does the student/supervisor have access to this data?**

If dataset is needed, yes.

### **References**

<https://www.w3schools.com/>

<http://freemarker.foofun.cn/>

<https://getbootstrap.com/>

<https://spring.io/guides>

<https://spring.io/projects/spring-boot#learn>