

Software Engineering Project Proposal

Length: approx. 3 pages per student

Project Title: Design and Implementation of a Website for Online Shopping

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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 view products, sign up to become a customer, managing products in a shopping cart, check out to place orders and so on.

Build a backend, which is an admin control panel that back end users can manage information about categories, brands, products, may be include a part for shippers to deliver products to the customers

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.

Front end

1. **View products and purchase:** In front-end application, anyone can view product details, check out to place orders, view orders, manage shipping addresses.
2. **Registration:** Visitors should sign up to become customers and then to process their orders.

Back end:

1. **Admin :** Admin can manage everything on the website, including manage settings and manage admin users, customers and so on.
 2. **Salesperson :** managing orders, customers, shipping rates, sales report, besides the permission to view products and update product price.
 3. **Shipper (Optional) :** Shippers can view products, view orders and update order status when they deliver products to the customers (I am not sure whether I can achieve this but I will try).
- **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.**

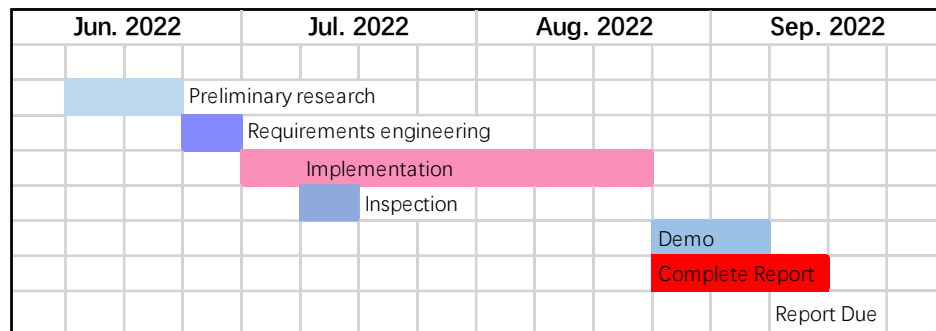
Frontend: HTML, CSS, JavaScript, JQuery. Bootstrap,
Backend: Mysql, Tomcat, Springboot, Maven

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>