Software Engineering Project Report
CS303

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Second Hand Book Shop

ABSTRACT

Today there are many web apps for online shopping but due to vast quantity of products, books somewhere get lost and most of them just sell new books.

This project aims to build a web application that is specified for just selling second hand books and old books. It’s an end-to-end deployed web app that gives freedom to anyone to buy and sell their books.

Table of Contents

1. Problem Statement

The software is designed for online selling of old books.

The important features to be developed is:

- Creating a login feature.
- Creating a signup feature.
- Creating a cart feature.
- Add to cart feature.
- Creating a sorting feature based on genre of book you want.

2. Process Model Type

We used Agile technique for development because:

- Limited project time.
- Project is incremental in nature.
- Daily communication through google meet.
- Code refactoring possible.
- Faster development time.

3. Software Requirement Specification

3.1 Overall description

It deals with all the important aspects like product functions, user characteristics, general constraints, assumptions, dependencies.

3.1.1 Product functions

The product offers following features:

- Login
- Signup
- Add to cart
- Genre based filtering of books.
- Cart features.

3.1.2 Users specification

- Admin

- Book buyer
- Seller

3.1.3 General constraints

- Web page available in English only.
- System deployed on free deploying service (python anywhere and Heroku)

3.2 External Interface Requirements

3.2.1 User Interfaces

- User interaction is through web application.

3.2.2 Hardware Interfaces

- RAM 64MB and above.

3.2.3 Assumptions

- To send a book request to sell a book a user have to send a mail to our admin specifying the location, contact number and price of book and ISBN of book.
- Our book service will come to your door and check the condition of book and negotiate the book price.

3.3 Functional requirements

3.3.1 Signup/ Login

- Provides facility to sign up and login to our site.

3.3.2 View carts

- Shows all the books you added to cart.

3.3.3 Sort

- Sort books based on your genre.

3.4 Non-Functional requirements

3.4.1 Availability of service

- Service available 24x7

3.4.2 Security

- Complete user details secured using passwords.

3.4.3 Portability

- Website can be used anywhere and anytime.

3.5 Design constraints

- Details must be entered for signup on the site.
- Software can be used on any device compatible with internet service.

3.6 Tools and framework requirements

- HTML
- CSS
- JavaScript

- Java
- Python
- Django
- GitHub
- ArchiMate tools
- JUCMNaV tool in Eclipse IDE
- PyCharm
- MS Word

4. Project Schedule

Schedule (In weeks)	Task done
Week 1	• Project pipeline discussion. • Work distribution. • Project requirements measurement.
Week 2	• Creation of GRL diagram for all actors. • Creating the front-end for our web application.
Week 3	• Created the jucm diagram in eclipse ide. • Creating the front-end for our web application. • Created the backend using JS and adding CSS.
Week 4	• Working on connection of backend with frontend. • Working on login/signup feature. • Deployed the project on GitHub and through GitHub deployed to web link using Python anywhere.
Week 5	• Tested automated testing using Selenium chrome driver and using python scripts. • Corrected clicks and links that were not working. • Product is ready to use.
Week 6	• Adding feature “add to cart” button. • “Add to Cart” feature added.

	• Deployed the project and tested on selenium.
Week 7	• "Add to cart" feature for sorting of books using different genres. • Deployed the projects with sorting feature addition. • Tested the feature using selenium.
Week 8	• Adding cart feature. • Deployed the projects with view cart option. • Tested the added links using selenium.
Week 9	• Deployed the final feature of project. • Tested successfully the web app.

5. Member work in detail

Student ID vs Tools	JUCMNAV	ArchiMate	Selenium
201951123	Admin was given some goals and tasks in order to ensure the security of customer data, trade information with sellers and buyers, and check the quality of books. Compare goals of different numerical values. In different scenarios, I analysed the qualitative evaluation of Sellers and Buyers. Worked on converting the project security to a soft goal.	Created a business layer diagram using this tool Use triggering relationship to join each event Viewpoint - Cooperation viewpoint Process includes information exchange between different actors at each stage such as admin-buyer, admin-seller, seller-buyer, buyer-service boy, seller-service boy.	Done testing with both selenium IDE and WebDriver. Testing includes login and sign up for the user. And testing is successful Language - python
201951128	Provide some resources between the seller, the buyer and the intermediary. A buyer and an intermediary are able to gather all the information about the seller so that the buyer can speak with the seller directly.	Implement an organizational view point. The viewpoint is from the perspective of the company head, following which there are three business actors: sellers, buyers, and administration. Business heads assign business roles to business actors	Done selenium testing with both selenium IDE and WebDriver Testing include login and add to cart functionality Language - python

	Examine GRL by varying the numerical values. Password and authentication have been added. Quantitative analysis performed of Admin. A new soft goal has been added called increase profit.	(sellers, buyers, administrators). Business role and actor Have an assignment relation View point - Service realization viewpoint	
201951130	For the buyer, I created a GRL diagram. He wants to get the best deal on books. There are two functions for the buyer, one of which is to search the book and another one is to check their profile. A soft goal feature has been added for editing details. Decomposition of Quality inspection added. Resource worked on gathering details.	Our mini project has an application layer The following are views 1) There are four application components (Buyer system, seller system, second hand book system, and stock system). In addition, there are three applications interfaces that connect application components Our second-hand book system application component system will provide one application service (Buy and sell books) Viewpoint - Implementation and deployment view point	Done selenium testing with both selenium IDE and WebDriver Testing includes the whole process Sign up, log in, filter, add to cart, check out, place order and log out Language - java

201951145	We have a task called provide information between the seller and intermediate in our GRL Diagram. In provide information task, seller will provide all detail so that intermediate can provide all the information to the buyer. In our GRL Diagram, There is a task between seller and intermediate named to provide information. Analyse GRL with different numerical values. Did numerical evaluation and analysis in different scenario. Changed contribution of buyer to seller through buyer account details.	1. I have implemented Application cooperation viewpoint. 2. there is a fetch API to fetch the user detail. Viewpoint - Application usages viewpoint	Done selenium testing with both selenium IDE and WebDriver Testing includes the login logout, add to cart and remove from cart. Language - python
201952217	For Seller, I created a GRL tree. Selling old books is the main goal of the seller. We then decompose the main goal into two different tasks, such as creating a profile and filling out the necessary information regarding books. In addition, it also depends on the administrator to provide all the details about products to consumers. Analyse the GRL with different numerical values. Sorting was created as a soft goal. Sorting is now divided into two soft goals	On the technology layer, which is typically used to model the technology architecture of an enterprise, I have made an infrastructure viewpoint. 1. I have created two nodes, such as Application Server and Client Side. 2. A path is shown between client side and Router. 3. Router is basically used to connect two Local area networks. 4. Application server consists of System software and a desktop for entertaining the queries of the client. View point - Service realization	Done selenium testing with both selenium IDE and WebDriver Testing include signup, log in, add to cart functionality. Language - python

6. Project link

- **(deployed link)**
  http://secondhandbookstore.pythonanywhere.com/

- **(GitHub link)**
  https://github.com/raj-gupta1/Book_Store

7. Scope of Project

- This project idea can be further upscaled to compete with big giants like amazon with little competition.
- This project is made taking Indian customers into account.
- Large scale deployment can be done through various services like Amazon AWS, Microsoft Azure.
- More features like end-to-end encryption technique can be added to add extra layer of security.
- Courier services and e-kart services can be added in future.

8. References

1. **https://www.archimatetool.com/downloads/Archi%20User%20Guide.pdf**
2. **https://www.selenium.dev/documentation/**
3. **http://www.eiti.uottawa.ca/~bochmann/SEG3101/Notes/SEG3101-ch3-5%20-%20Goal%20modeling%20-%20GRL.pdf**

Report documentation done by-

Raj

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---------THANK YOU---------