

Software Engineering

Spring 2023

Assignment 1

Due Date: 15 February 2023

PROJECT : BUDGET CONTROL SYSTEM

GROUP MEMBERS:

20L-1116 FAIQA ADNAN

20L-2156 MARIYAM ALI

20L-0921 AISHA MUHAMMAD NAWAZ

Task 1) Mention the Software Process Model that will be used in the development of your Software. Discuss the reasons for using the process model and why is it most suitable to your project?

Software Process Model: Agile Model (Scrum)

Reasons for using the process: Our choice of using the Agile Model method is heavily influenced by our aim to value requirements of individuals over anything else. We intend to put our main focus on responding to change e.g prices/requirements/budget of our user, rather than creating a strict plan and restricting the options we give to users e.g limiting user's purchases.

Why is it most suitable to our project: Since our project is divided into deliverables with strict deadlines and we are a small team, we believe it is best to use the SCRUM management framework as it is used for incremental product development and has fixed length iterations i.e sprints.

Task 2) Create and describe all the User Stories related to you Software Project.

<p><u>ID:US-01 Title: View Product</u></p> <p>As a customer I want to see product prices from different companies so that I can compare from options available to me.</p> <p><u>Description:</u></p> <ul style="list-style-type: none">o User's budget will be considered and product options falling under the budget will be displayedo User will be able to compare and choose most convenient option <p><u>Acceptance criteria:</u></p> <p>Application will show product prices and name of company and the user will be able to see & choose from all the products within their budget</p>	<p><u>Priority:</u></p> <p>High</p> <p><u>Estimate:</u></p> <p><u>Hours:</u></p> <p>10</p>
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<p><u>ID:US-02 Title: View Monthly Expenses</u></p> <p>As a customer I want to view and calculate how much I spent in a month, so that I can see if I am on track.</p> <p><u>Description:</u></p> <ul style="list-style-type: none">o User's daily expenses will be summed up and categorizedo User will be able to see total sum spent in each category <p><u>Acceptance criteria:</u></p> <p>Application will show the monthly expense to the user according to category and the user will be able to deduce which category they spent the most on.</p>	<p><u>Priority:</u></p> <p>High</p> <p><u>Estimate:</u></p> <p><u>Hours:</u></p> <p>6</p>
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<p><u>ID:US-03 Title: Suggest Changes</u></p> <p>As a customer I want to see areas where less money can be spent so that I can stay under my budget.</p> <p><u>Description:</u></p> <p>o User's budget and monthly expenses report will be thoroughly analyzed to see areas where expense is most</p> <p>O Comparison of user's past purchases will be done with cheaper options to suggest products for future purchases</p> <p><u>Acceptance criteria:</u></p> <p>Application will show users the products that they can purchase from cheaper companies and as a result users will be able to reduce monthly expenses.</p>	<p><u>Priority:</u></p> <p>High</p> <p><u>Estimate:</u></p> <p><u>Hours:</u></p> <p>3</p>
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<p><u>ID:US-04 Title: View Improvements</u></p> <p>As a customer I want to see which changes in purchases led to less monthly expense while using the software so that I can see where better decisions were made.</p> <p><u>Description:</u></p> <p>o User’s history of purchases will be analyzed</p> <p>O Comparison of user’s old and new expenses will be shown category wise.</p> <p><u>Acceptance criteria:</u></p> <p>Application will show users the choices of products that led to a decrease in expense.</p>	<p><u>Priority:</u></p> <p>High</p> <p><u>Estimate:</u></p> <p><u>Hours:</u></p> <p>4</p>
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<p><u>ID:US-05 Title: Monthly Summary</u></p> <p>As a customer I want to view how much I spent on different areas, like grocery, fuel, bills, entertainment etc. so that I can review and correct my spending habits next month.</p> <p><u>Description:</u></p> <p>O The software will contain different expenditure categories like grocery, fuel, bills, entertainment, school fees etc. and sort the user's spending according to them.</p> <p>O User will receive a monthly summary of their spendings, and compare it with their spending goals.</p> <p><u>Acceptance criteria:</u></p> <p>Application will maintain a record of the user's spendings, according to some major categories, and present them to the user at the end of the month.</p>	<p><u>Priority:</u></p> <p>High</p> <p><u>Estimate:</u></p> <p><u>Hours:</u></p> <p>8</p>
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<p><u>ID:US-07 Title: Objective Decision-Making</u></p> <p>As a customer I want to be able to view my choices without the pestering of salespeople, so that I can make my decisions objectively.</p> <p><u>Description:</u></p> <p>O User will be able to view multiple choices for any required product, and make objective informed decisions.</p> <p>O Any salesperson, under the guise of improved customer service, won't be able to talk the customer out of keeping within their budget.</p> <p><u>Acceptance criteria:</u></p> <p>Application will allow users to view and analyze their choices objectively, based on prices and ratings.</p>	<p><u>Priority:</u></p> <p>Medium</p> <p><u>Estimate:</u></p> <p><u>Hours:</u></p> <p>2</p>
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<p><u>ID:US-06 Title: Rate Suggestions</u></p> <p>As a customer I want to rate and write reviews about the purchases I made after the software's suggestions, so that I can share my opinion about each suggestion.</p> <p><u>Description:</u></p> <p>O User will be able to rate and review the given suggestions that they select.</p> <p>O This way the users won't have to compromise quality in favor of price, and will make informed decisions.</p> <p><u>Acceptance criteria:</u></p> <p>Application will allow users to give a star rating, and write a review to any suggestions they mark as selected.</p>	<p><u>Priority:</u></p> <p>Medium</p> <p><u>Estimate:</u></p> <p><u>Hours:</u></p> <p>4</p>
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<p><u>ID:US-08 Title: View Customer Reviews and Ratings</u></p> <p>As a customer I want to see customer reviews and ratings so that I can decide which product is the best and reliable to buy under my budget.</p> <p><u>Description:</u></p> <ul style="list-style-type: none">o Customer Reviews for each product will be analyzedo User will be able to make a decision about his purchase after looking at the reviews <p><u>Acceptance criteria:</u></p> <p>Application will show customer reviews and ratings to the viewers.</p>	<p><u>Priority:</u></p> <p>High</p> <p><u>Estimate:</u></p> <p><u>Hours:</u></p> <p>6</p>
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<p><u>ID:US-09 Title: View Reward Points</u></p> <p>As a customer I want to see my reward points after every purchase so I can get discounts at different supermarkets</p> <p><u>Description:</u></p> <ul style="list-style-type: none">o User's will be given reward points after every purchase if he accepts the offer the system provides.o User will be able to then use these reward points at selective super markets to get some discount on their purchase <p><u>Acceptance criteria:</u></p> <p>Application will show the reward points for customer after every purchase</p>	<p><u>Priority:</u></p> <p>Medium</p> <p><u>Estimate:</u></p> <p><u>Hours:</u></p> <p>5</p>
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<p><u>ID:US-10 Title: View Past Purchases</u></p> <p>As a customer I want to see my past purchases so that I can buy a product bought previously again.</p> <p><u>Description:</u></p> <ul style="list-style-type: none">o User's past purchases will be displayedo User will be able to select a product from past purchases if he wants to buy again or make a better decision after comparing <p><u>Acceptance criteria:</u></p> <p>Application will show the past purchases of user</p>	<p><u>Priority:</u></p> <p>Medium</p> <p><u>Estimate:</u></p> <p><u>Hours:</u></p> <p>5</p>
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Task 3) Mention different roles that each member will play in your group project.

Team Duties:

20L-0921 Aisha Muhammad Nawaz: Scrum Master, developer

- Assign roles, tasks, check and report process.
- Develop core functions of the application.
- Ensure all user requirements have been considered

20L-2156 Mariyam Ali: Product Owner, Database Administrator, designer, developer

- Design and develop databases.
- Develop core functions of the app.
- Responsible for ensuring reliability of data used in software e.g prices of products

20L-1116 Faiqa Adnan: User experience engineer, developer, tester

- Unit and integration testing
- Communicate design with developers.
- Develop core functions of the app.
- Make sure user experience is satisfactory