Beauty Retail E-Commerce Platform
Project Plan

Q1.Identify the lifecycle to be followed for the execution of your project and justify why you have chosen the model. **(PES2UG21CS519)**

1. Our team has decided to use Agile methodology as the lifecycle for our project.
2. For our project, which deals with development and maintenance of an e-commerce platform for a beauty/fashion , we ultimately chose Agile because it deals with:

    a. Frequent Customer Interaction: Agile as a methodology heavily emphasizes on the customer's needs and requirements. In the fashion and cosmetics retail industry, customer critique is crucial for developing high quality products.Customer involvement in the development process will help the team to gather valuable feedback about the platform's features such as the user interface,the product catalog and the overall shopping experience.
    b. Iterative Development: Agile's iterative approach allows for teams to focus on continuous releases of the whole product, in the form of short,frequent features.
    c. Cross-Functional Collaboration: One of Agile's benefits is that it encourages collaboration amongst different teams, including the development/tech teams, designers, sales and marketing teams,etc. For example, with relation to our project, the design team can work with the development team to make sure the user interface is visually appealing to customers. The marketing team can also work with the development team to optimize the platform by implementing promotional features.
    d. Continuous Improvement: Agile focuses on continuous improvement of the product by keeping in mind the customer's feedback and the changing trends of the industry and market.

Q2. Identify the tools which you want to use throughout the lifecycle like planning tools,design tools, version control,development tools, bug tracking and testing tools.**(PES2UG21CS519)**

1. Planning Tools: For planning out our entire project, and keeping track of the deliverables,we'd ideally use tools such as Excel, Google Drive and Microsoft Project.
2. Design Tools: To build basic prototypes and for the design process as a whole, our team made heavy use of Figma and Canva.
3. Version Control: Git will be used for version control as it is a tool which allows for multiple collaborators to work on the same project.
4. Development Tools: Tools used for our project's development are VSCode, an RDBMS such as PostgreSQL.
5. Bug Tracking Tools: Jira is a good tool for bug tracking as it provides a good view of the bug's status throughout the whole testing phase.
6. Testing Tools: Selenium would be an ideal tool to use to test our project, as it provides a platform for the testing team to write tests in various programming languages, to test the functionality of our application.

Q3.Determine all the deliverables and categorize them as reuse/build components and justify the same.**(PES2UG21CS519)**

The deliverables for this project include:

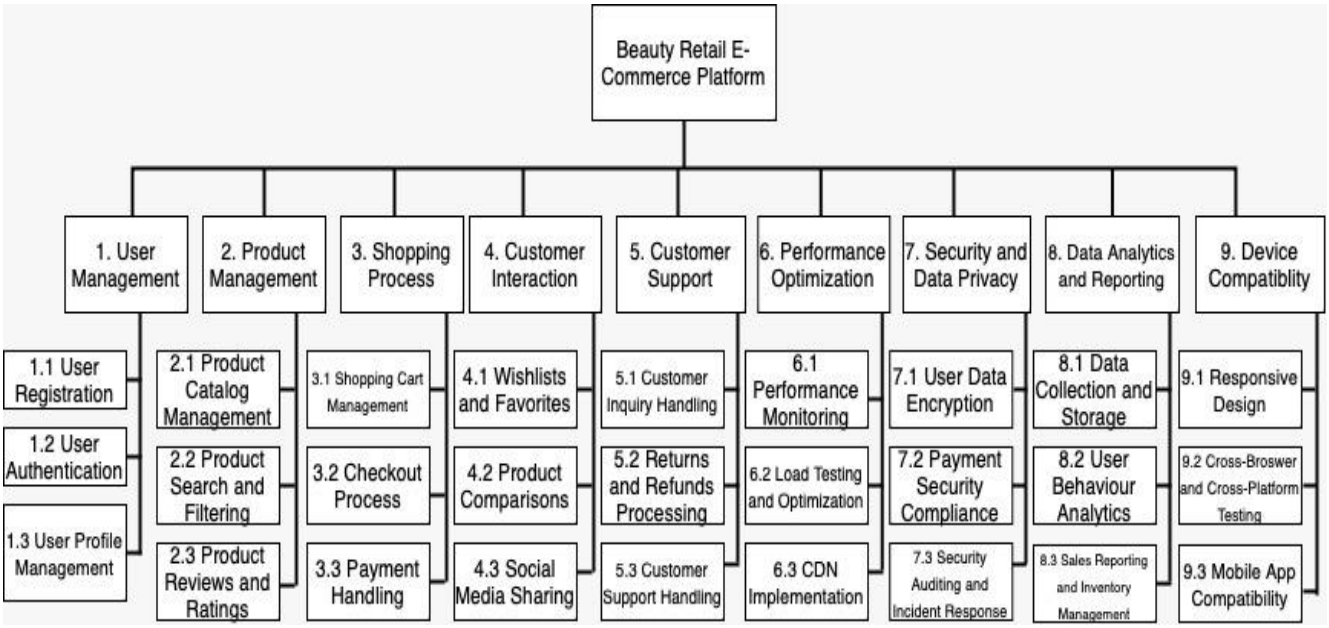
1. Build Components: These are all the deliverables which are specifically developed and implemented for a particular project. This means that these components have functionalities unique to the product they are being developed for. With respect to our project, the build components include:
    a. *Front-End:* These include HTML,CSS,JS files that specify features such as user profile, page view, product displays, which can be tailored to user's needs.
    b. *Back-End:* Backend code includes server-side code and database integration. It is considered a build component as it is built to handle our product's functionalities and operations. It has to be customized in order to ensure that unique business operations can be performed.
    c. *Database:* This is also a build component as the database schema is customized to store our platform's data only.
    d. *Unit Tests:* Unit tests and test cases are customized in order to test and validate specific functions of our system. Each test case will be designed in order to

validate the behavior of some function or module which belongs to our retail platform.

e. *Documentation:* This includes all documentation such as technical documentation for the team, and also documents such as user manuals. They are customized to explain the distinct features , architecture, technical aspects, and user interaction with our product.

2. Reuse Components: Reuse components are pre-existing functionalities or frameworks which are used for multiple projects, meaning that they aren't unique to one particular project. In context of our e-commerce platform, these include:
   a. *UI Components:* UI Components such as buttons, headers,footers,forms,etc are designed to be consistent and can be reused across different pages of our website.
   b. *Backend APIs:* These are interfaces which are used for interaction with back-end services. They're considered to be reuse components, because standardized APIs used for common functionalities such as payment processing,user authentication,etc.,can be reused across several projects.

Q4. Create a WBS for the entire functionalities in detail.**(PES2UG21CS541)**



Q5. Do a rough estimate of effort required to accomplish each task in terms of person-months.
(PES2UG21CS531)

Effort=a(KLOC)^b
Time=c(Efforts)^d

For the entire project => 4=2.5(Effort)^0.38
Effort=**3.448 person months**
3.448=2.4(KLOC)^1.05
KLOC=1.4120 =>**1412 lines of code (just an estimate)**

Estimates for each task (could change during the course of the project)
User Interface: 300 LOC
Effort = 2.4 * (0.3) ^ 1.05 = 0.51 person-months

User Login: 400 LOC
Effort = 2.4 * (0.4) ^ 1.05 = 0.74 person-months

User Profile: 400 LOC
Effort = 2.4 * (0.4) ^ 1.05 = 0.74 person-months

Product Catalog: 800 LOC
Effort = 2.4 * (0.8) ^ 1.05 = 1.34 person-months

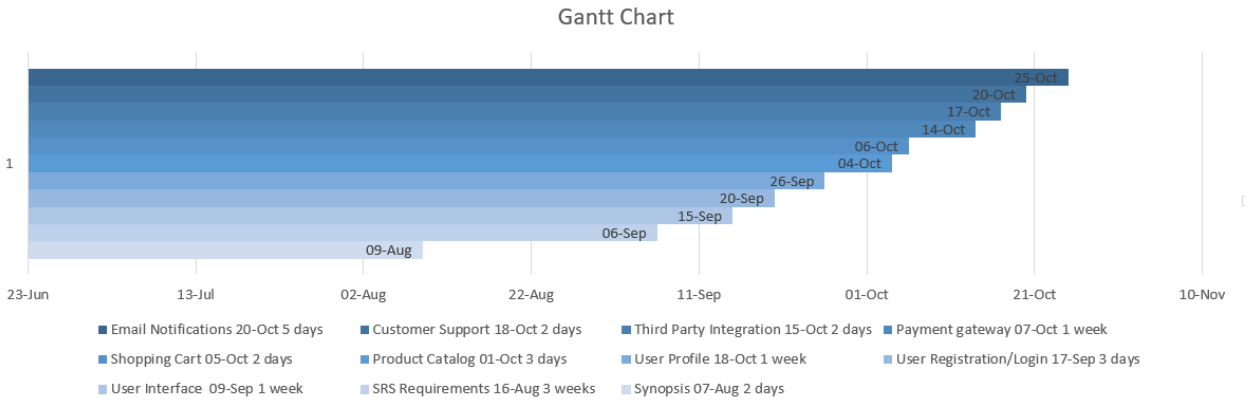
Shopping Cart: 300 LOC
Effort = 2.4 * (0.3) ^ 1.05 = 0.49 person-months

Payment Gateway: 400 LOC
Effort = 2.4 * (0.4) ^ 1.05 = 0.71 person-months

Third-Party Integration: 500 LOC
Effort = 2.4 * (0.5) ^ 1.05 = 0.97 person-months

Q6. Create the Gantt Chart for scheduling using any tool.**(PES2UG21CS531)**

The tool used here is MS Excel.



1	Task	Start Date	Duration	End Date	Progress (%complete)
2	Synopsis	07-Aug	2 days	09-Aug	100%
3	SRS Requirements	16-Aug	3 weeks	06-Sep	100%
4	User Interface	09-Sep	1 week	15-Sep	10%
5	User Registration/Login	17-Sep	3 days	20-Sep	
6	User Profile	18-Oct	1 week	26-Sep	
7	Product Catalog	01-Oct	3 days	04-Oct	
8	Shopping Cart	05-Oct	2 days	06-Oct	
9	Payment gateway	07-Oct	1 week	14-Oct	
10	Third Party Integration	15-Oct	2 days	17-Oct	
11	Customer Support	18-Oct	2 days	20-Oct	
12	Email Notifications	20-Oct	5 days	25-Oct	