

Software Engineering

UE20CS303

Project Planning

Cab Aggregator System

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1: Identify the lifecycle to be followed for the execution of your project and justify why you have chosen the model.

Under the Software Development Life Cycle, we will be employing Agile methodology.

In the Agile method, the entire project is divided into small incremental builds.

We use Agile since:

- * It is difficult to think in advance which software requirements will persist and which will change.
- * It is equally difficult to predict how user priorities will change as the project proceeds. Hence, it is easy to quickly adapt to change.
- * On an Agile project, the team does not attempt to develop all features at once. Instead, the team assigns a smaller subset of features to each sprint. That way, the developers have more time to perfect those items before release.
- * It helps analyze and improve products while they're going through different phases of development.
- * The project is usually transparent from start to finish.
- * Projects are broken down into manageable units, making it easier for the team to focus on high-quality development, testing, and collaboration. Defects and mismatches within the software can be easily found and fixed early, thereby improving the overall quality.

2: Identify the tools which u want to use throughout the lifecycle like planning tool, design tool, version control, development tool, bug tracking, testing tool.

We plan on using the following:

Planning tool - Jira, Asana

Design tool - Jira

Version control - Git

Development tool - Atom, Jira, Github

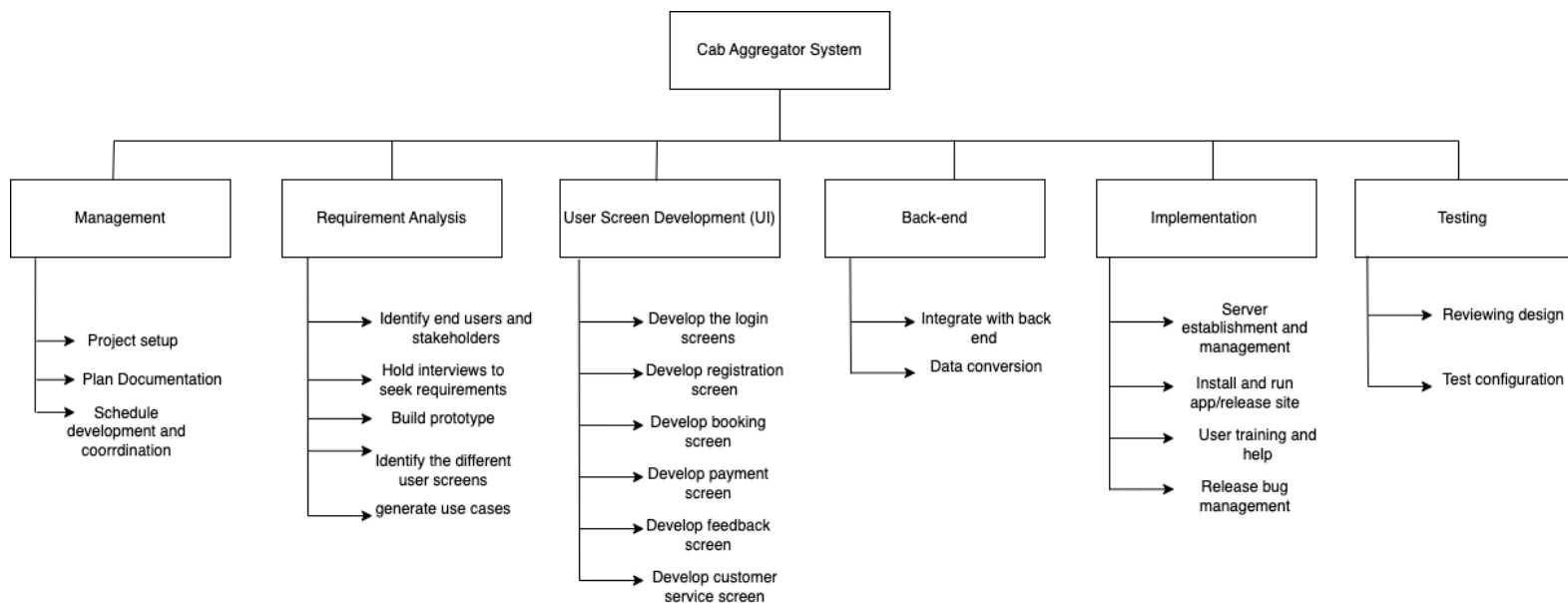
Bug tracking tool - Jira, Bugzilla, BugNet, Redmine, Mantis, Backlog

Testing tool - Selenium, TestComplete, LoadRunner[HP]

3: Determine all the deliverables and categorize them as reuse/build components and justify the same.

1. Tracking nearby drivers.
2. Ability to set the pickup location on the map without typing an address.
3. Ability to see relevant info about the driver: name, photo, contact info, rating, car type, and ETA (estimated time of arrival).
4. Notification upon taxi arrival.
5. Selecting car typeRiders should be able to choose between different classes of vehicles (In the case of Uber there are UberX, UberXL, UberSelect and Uber BLACK). Of course, the fares will vary depending on the type of vehicle.
6. Sharing rides with other passengersA rider should be able to share a booking with another rider who's heading in the same direction and split the cost.
7. Favorite addresses for convenient future bookings.

4: Create a WBS for the entire functionalities in detail.



5: Do a rough estimate of effort required to accomplish each task in terms of person months.

| Software Project | A | B | C | D |
|------------------|-----|------|-----|------|
| Organic | 2.4 | 1.05 | 2.5 | 0.38 |
| Semi-Detached | 3.0 | 1.12 | 2.5 | 0.35 |
| Embedded | 3.6 | 1.20 | 2.5 | 0.32 |

Considering the software project using semi-detached mode with 0.3 Kloc

Effort (E) = $a \cdot (KLOC)^b$

$$3.0 \cdot (0.3)^{1.12} = 1.008 \text{ PM}$$

6: Create the Gantt Chart for scheduling using any tool.