PES UNIVERSITY, BANGALORE

Department of Computer Science and Engineering

Team Number – 4

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Format 3

Project Plan Document

Instructions:

1: Prepare a detailed plan for your project which comprises of the below mentioned details.

2: Upload pdf document through the given link.

3: The name of the document should be your Project ID.

Things to be included as part of the project plan.

1: Identify the lifecycle to be followed for the execution of your project and justify why you have chosen the model. (UJJWAL TIKU -PES2UG20CS475)

Ans

Our project will adopt the Agile software model(SCRUM). The Toll Booth Management system will be used to combat the problems of long vehicular queues, fuel wastage, high accident risks, and environmental pollution that come with the use of manual toll collection systems. Here we will aim to reduce copious planning time and increase response time. Our main goal will be to adjust this project to continuous change and realignment with the needs and the goals of the client.

Our project team will follow the characteristics of Scrum Teams, which are:

i)Cross functional

ii)Self Organising

iii)Each member is a contributor to the deliverables and

responsible for shipping deliverable increments.

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

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Ans

Planning Tool : Gantt Pro

Design Tool : JIRA

Version Control : GitHub

Development Tool : MERN stack ,Firebase,VS Code

Bug Tracking :

Testing Tool :

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

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- **LOGIN :** Build Component

  (User must put his user id and password or if the user is new it handles the registration to access the online toll booth)

- **TOLL HANDLER MANAGEMENT :** Build Component

  (This handles the information of the vehicle and the amount of money they earned each. Keeps the of charges of the vehicles based on paid or not etc)

- **BALANCE MANAGEMENT :** Build Component

  (It keeps the track of the amount in the user toll account so that they can pay the toll online or If the collection price changes it has to be manually)

- **TRANSACTION MANAGEMENT :** Build Component

  (If payment is received then the barrier will be automatically lifted. A Pay ticket is generated based on the car type and toll.)

- **AUTOMATIC SCAN MANAGEMENT :** Reuse Component

(It scan the the unique rng given to the vehicle which helps in the transaction)

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

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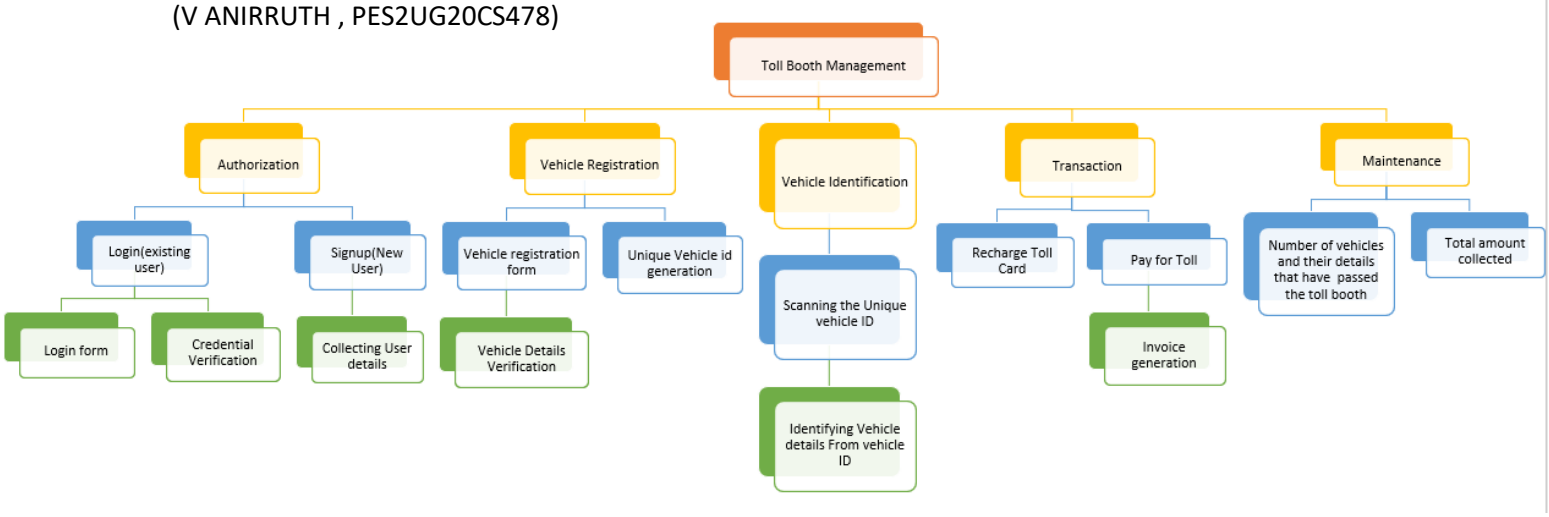

5: Do a rough estimate of effort required to accomplish each task in terms of person months.

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We know effort=A_b * (KLOC)$^{B}{}_{b}$ Person Months.

Since our project is of semi-detached nature, A=3.00 and B=1.12.

1)Authorization Of User

Estimation=20 KLOC

Effort=3*(20)$^{1.12}$=85.95 PM

2)Vehicle Registration

Estimation=20 KLOC

Effort=3*(20)$^{1.12}$=85.95 PM

3)Vehicle Identification

Estimation=20 KLOC

Effort=3*(15)$^{1.12}$=85.95 PM

4)Transaction

Estimation=15 KLOC

Effort=3*(15)$^{1.12}$=62.27 PM

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

(YASHWITH D ALVA , PES2UG20CS483)