

Project Planning Phase

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|---------------|----------------------------------------|
| Date | 21 October 2022 |
| Team ID | PNT2022TMID02682 |
| Project Name | Project – SMART SOLUTIONS FOR RAILWAYS |
| Maximum Marks | 8 Marks |

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Story Points | Priority | Team Members |
|----------|-------------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|------------------------------------------------------------|
| Sprint-1 | | US-1 | Create the IBM Cloud services which are being used in this project. | 6 | High | Ashok Aadhav R R, Aravindhan S, Dharshini M, Ida Winona AJ |
| Sprint-1 | | US-2 | Configure the IBM Cloud services which are being used in completing this project. | 4 | Medium | Ashok Aadhav R R, Aravindhan S, Dharshini M, Ida Winona AJ |
| Sprint-1 | | US-3 | IBM Watson IoT platform acts as the mediator to connect the web application to IoT devices, so create the IBM Watson IoT platform. | 5 | Medium | Ashok Aadhav R R, Aravindhan S, Dharshini M, Ida Winona AJ |

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|----------|--|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------|---------------------------------------------------------------------|
| Sprint-1 | | US-4 | In order to connect the IoT device to the IBM cloud, create a device in the IBM Watson IoT platform and get the device credentials. | 5 | High | Ashok Aadhav R R, Aravindhan S, Dharshini M, Ida Winona AJ |
| Sprint-2 | | US-1 | Configure the connection security and create API keys that are used in the Node-RED service for accessing the IBM IoT Platform. | 10 | High | Ashok Aadhav R R, Aravindhan S, Dharshini M, Ida Winona AJ |
| Sprint-2 | | US-2 | Create a Node-RED service. | 10 | High | Ashok Aadhav R R, Aravindhan S, Dharshini M, Ida Winona AJ |
| Sprint-3 | | US-1 | Develop a python script for publishing the location (latitude and longitude) data to the IBM IoT Platform and the other python code to read the QR Code and fetch the data from Cloudant DB. | 20 | High | Ashok Aadhav R R, Aravindhan S, Dharshini M, Ida Winona AJ |

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Story Points | Priority | Team Members |
|---------------|--------------------------------------|--------------------------|--------------------------------------------------|---------------------|-----------------|---------------------------------------------------------------------|
| Sprint-4 | | US-1 | Develop the web application using Node-RED | 10 | Medium | Ashok Aadhav R R, Aravindhan S, Dharshini M, Ida Winona AJ |
| Sprint-4 | | US-2 | Testing the Web UI by giving the required inputs | 10 | High | Ashok Aadhav R R, Aravindhan S, Dharshini M, Ida Winona AJ |

| Sprint | Total Story Points | Duration | Sprint Start Date | Sprint End Date (Planned) | Story Points Completed (as on Planned End Date) | Sprint Release Date (Actual) |
|----------|--------------------|----------|-------------------|---------------------------|-------------------------------------------------|------------------------------|
| Sprint-1 | 20 | 6 Days | 24 Oct 2022 | 29 Oct 2022 | 20 | 29 Oct 2022 |
| Sprint-2 | 20 | 6 Days | 31 Oct 2022 | 05 Nov 2022 | 20 | 05 Nov 2022 |
| Sprint-3 | 20 | 6 Days | 07 Nov 2022 | 12 Nov 2022 | 20 | 12 Nov 2022 |
| Sprint-4 | 20 | 6 Days | 14 Nov 2022 | 19 Nov 2022 | 20 | 19 Nov 2022 |

Project Tracker, Velocity & Burndown Chart: (4 Marks)

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{\text{sprint duration}}{\text{velocity}} = \frac{20}{10} = 2$$