

## Project Planning Phase

|               |  |
|---------------|--|
| Date          | 31october2022  |
| Team ID       | PNT2022TMID47485                                     |
| Project Name  | Signs with smart connectivity for better road safety |
| Maximum Marks | 8 Marks  |

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

Use the below template to create product backlog and sprint schedule

| 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     | R.sneha<br>S.sneha<br>P.sowmiya<br>N.Rachel sarah yazhini |
| Sprint-1 |                               | US-2              | Configure the IBM Cloud services which are being used in completing this project.   | 4            | Medium   | R.sneha<br>S.sneha<br>P.sowmiya<br>N.Rachel sarah yazhini |
| 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   | R.sneha<br>S.sneha<br>P.sowmiya<br>N.Rachel sarah yazhini |
| 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     | R.sneha<br>S.sneha<br>P.sowmiya<br>N.Rachel sarah yazhini |

|               |                                      |                          |   |                     |                 |  |
|---------------|--------------------------------------|--------------------------|---|---------------------|-----------------|--|
| 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            | R.sneha<br>S.sneha<br>P.sowmiya<br>N.Rachel sarah<br>yazhini |
| <b>Sprint</b> | <b>Functional Requirement (Epic)</b> | <b>User Story Number</b> | <b>User Story / Task</b>  | <b>Story Points</b> | <b>Priority</b> | <b>Team Members</b>  |
| Sprint-2      |                                      | US-2                     | Create a Node-RED service.  | 10                  | High            | R.sneha<br>S.sneha<br>P.sowmiya<br>N Rachel sarah<br>yazhini |
| Sprint-3      |                                      | US-1                     | Develop a python script to publish random sensor data such as temperature, humidity,rain to the IBM IoT platform                | 7                   | High            | R.sneha<br>S.sneha<br>P.sowmiya<br>N.Rachel sarah<br>yazhini |
| Sprint-3      |                                      | US-2                     | After developing python code, commands are received just print the statements which represent the control of the devices.       | 5                   | Medium          | R.sneha<br>S.sneha<br>P.sowmiya<br>N.Rachel sarah<br>yazhini |
| Sprint-3      |                                      | US-3                     | Publish Data to The IBM Cloud   | 8                   | High            | R.sneha<br>S.sneha<br>P.sowmiya<br>N.Rachel sarah<br>yazhini |
| Sprint-4      |                                      | US-1                     | Create Web UI in Node- Red  | 10                  | High            | R.sneha<br>S.sneha<br>P.sowmiya<br>N.Rachel sarah<br>yazhini |

|          |  |      |   |    |      |  |
|----------|--|------|---|----|------|--|
| Sprint-4 |  | US-2 | Configure the Node-RED flow to receive data from the IBM IoT platform and also use Cloudant DB nodes to store the received sensor data in the cloudant DB | 10 | High | R.sneha<br>S.sneha<br>P.sowmiya<br>N.Rachel sarah<br>yazhini |
|----------|--|------|---|----|------|--|

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

| 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                  |

#### 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)

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

**Burndown Chart:**

A burndown chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burndown charts can be applied to any project containing measurable progress overtime.

## Burndown chart:

