

## Project Planning Phase

Team ID	PNT2022TMID19801
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		USN-1	Create the IBM Cloud services which are being used in this project.	6	High	Charulatha S Akshaya M Brindha P J GopalakrishnanT
Sprint-1		USN-2	Configure the IBM Cloud services which are being used in completing this project.	4	Medium	Charulatha S Akshaya M Brindha P J GopalakrishnanT
Sprint-1		USN-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	Charulatha S Akshaya M Brindha P J GopalakrishnanT
Sprint-1		USN-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	Charulatha S Akshaya M Brindha P J GopalakrishnanT
Sprint-2		USN-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	Charulatha S Akshaya M Brindha P J GopalakrishnanT

<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		USN-2	Create a Node-RED service.	10	High	Charulatha S Akshaya M Brindha P J GopalakrishnanT
Sprint-3		USN-1	Develop a python script to publish random sensor data such as temperature, humidity, rain to the IBM IoT platform	7	High	Charulatha S Akshaya M Brindha P J GopalakrishnanT
Sprint-3		USN-2	After developing python code, commands are received just print the statements which represent the control of the devices.	5	Medium	Charulatha S Akshaya M Brindha P J GopalakrishnanT
Sprint-3		USN-3	Publish Data to The IBM Cloud	8	High	Charulatha S Akshaya M Brindha P J GopalakrishnanT
Sprint-4		USN-1	Create Web UI in Node- Red	10	High	Charulatha S Akshaya M Brindha P J GopalakrishnanT
Sprint-4		USN-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	Charulatha S Akshaya M Brindha P J GopalakrishnanT

**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 burn down 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, burn down charts can be applied to any project containing measurable progress over time.

