

**Project Planning Phase**  
**(Product Backlog, Sprint Planning, Stories, Story points)**

Assignment Date	08 NOVEMBER2022
Team ID	PNT2022TMID42277
Project Name	Gas Leakage Monitoring and Alerting System

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

Sprint	Functional Requirement (Epic)	User Story	User Story / Task	Story Point	Priority	Team Members
Sprint-1	Create	US-1	Create the IBM Cloud services which are being used in this project.	5	High	Gowthaman Logisha
Sprint-1	Configure	US-2	Configure the IBM Cloud services which are being used in completing this project.	1	Medium	Siva Dharshini Keerthana
Sprint-1	Create	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.	1	Medium	Yuvan Sankar Raja Logisha
Sprint-1	Configure	US-4	Configure the IBM Watson IoT which are being used to display the output.	13	High	Gowthaman Keerthana
Sprint-2	Create	US-1	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.	13	High	Siva Dharshini Logisha
Sprint-2	Configure	US-2	Configure a device in the IBM Watson IoT platform and get the device credentials.	3	Medium	Gowthaman Yuvan Sankar Raja

Sprint-2	Create	US-3	Create a Node-RED service.	3	High	Siva Dharshini Keerthana
Sprint-2	Configure	US-4	Configure the connection security and create API keys that are used in the Node-RED service for accessing the IBM IoT Platform.	1	Medium	Yuvan Sankar Raja Keerthana
Sprint-3	Develop	US-1	Develop a python script to publish random sensor data such as temperature, Flame level and Gas level to the IBM IoT platform	13	High	Gowthaman Siva Dharshini
Sprint-3	Configure	US-2	After developing python code and commands just run the code	1	Medium	Logisha Yuvan Sankar Raja
Sprint-3	Print	US-3	Print the statements which represent the control of the devices.	1	Low	Gowthaman Keerthana
Sprint-3	Publish	US-4	Publish Data to The IBM Cloud	5	High	Siva Dharshini Logisha
Sprint-4	Create	US-1	Create Web UI in Node- Red	5	High	Siva Dharshini Yuvan Sankar Raja
Sprint-4	Configure	US-2	Configure the Node-RED flow to receive data from the IBM IoT platform	5	High	Gowthaman Keerthana
Sprint-4	Configure	US-3	Use cloudant DB nodes to store the received sensor data in the cloudant DB	5	High	Logisha Yuvan Sankar Raja
Sprint-4	Publish	US-4	Publish the received data in web application	5	High	Siva Dharshini Keerthana

## Project Tracker, Velocity & Burn-down 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:

The average velocity(AV) per iteration unit (story points per day) can be defined as sprint duration by velocity (points per sprint).

$$AV = \frac{\text{sprint duration}}{\text{velocity}}$$

### Given:

Sprint duration= 6days

Velocity= 20

$$AV = 6/20$$

$$AV = 0.3$$

## 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.

