Project Planning Phase

Date	18 October 2022
Team ID	PNT2022TMID15087
Project Name	Gas Leakage Monitoring and Alerting system for industries
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	Objective	USN-1	As a system, the gas sensor should detect the gas.	8	High	Anitha K Kanimozhi J Aartisha S Naveen Karthick R
Sprint 1	Features	USN-2	As a system, the gas sensor values and the exact location of the detected gas should be sent.	2	Low	Anitha K Kanimozhi J Aartisha S Naveen Karthick R
Sprint 1	Features	USN-3	As a system, as soon as the detected gas reaches the threshold level, the red color LED should be turned ON.	5	High	Anitha K Kanimozhi J Aartisha S Naveen Karthick R
Sprint 1	Features	USN-4	As a system, as soon as the detected gas reaches the threshold level, the siren (alarm) should be turned ON.	5	High	Anitha K Kanimozhi J Aartisha S Naveen Karthick R
Sprint 2	Features	USN-5	As a system, the gas alarm should detect automatically when the gas leakage is held.	5	Medium	Anitha K Kanimozhi J Aartisha S Naveen Karthick R
Sprint 2	Features	USN-6	As a system, it will indicate the gas leakage and the exact location.	5	Medium	Anitha K Kanimozhi J

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
						Aartisha S Naveen Karthick R
Sprint 2	Data transfer	USN-7	As a cloud system, it should send the data of the sensor values to the IBM cloud.	5	Low	Anitha K Kanimozhi J Aartisha S Naveen Karthick R
Sprint 2	Data transfer	USN -8	As a cloud system, the data's will be received in the IBM Watson IOT Platform.	5	Medium	Anitha K Kanimozhi J Aartisha S Naveen Karthick R
Sprint 3	Data transfer	USN-9	As a program, it should retrieve the API key of the IBM cloud to send the details of the system	5	Medium	Anitha K Kanimozhi J Aartisha S Naveen Karthick R
Sprint 3	Data transfer	USN-10	As a cloud system, the IBM cloud should send the data to Node-red and the Node Red should Process the data from IBM cloud.	4	High	Anitha K Kanimozhi J Aartisha S Naveen Karthick R
Sprint 3	Data Transfer	USN-11	As a cloud system, the IBM Node Red should send the data to the dashboard	3	Medium	Anitha K Kanimozhi J Aartisha S Naveen Karthick R
Sprint 3	Dashboard	USN-12	As a user, I can access the dashboard and make use of available resources	4	Medium	Anitha K Kanimozhi J Aartisha S Naveen Karthick R
Sprint 3	Focus	USN-13	As a system, the dashboard must display location of the gas leakage.	4	High	Anitha K Kanimozhi J Aartisha S Naveen Karthick R
Sprint 4	Data transfer	USN-14	As a cloud system, the Node Red must send data to MIT app through API key	3	Medium	Anitha K Kanimozhi J Aartisha S Naveen Karthick R

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint 4	Data transfer	USN-15	As an application, the MIT app should receive the data from Node-Red in the backend and do necessary processes.	5	Medium	Anitha K Kanimozhi J Aartisha S Naveen Karthick R
Sprint 4	Focus	USN-16	As an application, it should display the details through the frontend of the MIT app.	8	High	Anitha K Kanimozhi J Aartisha S Naveen Karthick R
Sprint 4	Focus	USN-17	As an application, it should display the notification when the gas is detected in the gas sensor to the user through the notification with a siren.	4	High	Anitha K Kanimozhi J Aartisha S Naveen Karthick R

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)

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