Project Planning Phase

TEAM ID	PNT2022TMID44431
PROJECT NAME	Gas leakage monitoring and alerting system
MAXIMUM MARKS	8Marks

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	Objective	USN-1	As a system, the gas sensor should detect the gas	8	High	Surendar Muthupandi
Sprint-1	Features	USN-2	As a system, the gas sensor values should be displayed in a LCD screen	2	Low	Surendar Muthupandi
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	Surendar Muthupandi
Sprint-1	Features	USN-4	As a system, as soon as the detected gas reaches the threshold level, the siren should be turned ON.	5	High	Surendar Muthupandi
Sprint-2	Focus	USN-5	As a system, it should the send the location where the gas is detected	8	High	Surendar Muthupandi
Sprint-2	Focus	USN-6	As a system, it should also send the alerting SMS to the registered phone number	2	Low	Surendar Muthupandi

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-2	Features	USN-7	As a system, the gas leakage pipe should be closed automatically once there it attains the threshold value	5	Medium	Surendar Muthupandi
Sprint-2	Features	USN-8	As a system, it will indicate that the gas leakage pipe is closed in the LCD screen and send SMS to the registered mobile number.	5	Medium	Surendar Muthupandi
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.	2	Low	Surendar Muthupandi
Sprint-3	Data Transfer	USN-10	As a system, it should send the data of sensor values along with latitudes and longitudes to the IBM cloud	5	Medium	Surendar Muthupandi
Sprint-3	Data Transfer	USN-11	As a cloud system, the IBM cloud should send the data to NodeRed	2	Medium	Surendar Muthupandi
Sprint-3	Data Transfer	USN-12	As a system, it should collect the data from the NodeRed and give it to the backend of the mit app.	3	Medium	Surendar Muthupandi
Sprint-3	Data Transfer	USN-13	As an application, it should display the details of the gas level and other details to the user through the frontend of the mit app.	8	High	Surendar Muthupandi
Sprint-4	Registration	USN-14	As a user, I must first register my email andmobile number in the website	2	High	Surendar Muthupandi

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-4	Registration	USN-15	As a user, I must receive confirmation mail and SMS on registration	2	Medium	Surendar Muthupandi
Sprint-4	Login	USN-16	As a user, I can login into the web application through email and password.	3	High	Surendar Muthupandi
Sprint-4	Dashboard	USN-17	As a user, I can access the dashboard andmake use of available resources.	2	Medium	Surendar Muthupandi
Sprint-4	Focus	USN-18	As a user, I must receive an SMS once the leakage is detected.	5	High	Surendar Muthupandi
Sprint-4	Allocation	USN-19	As an admin, I must receive information about theleakage along with location and share exact location and route to the person.	3	High	Surendar Muthupandi
Sprint-4	Allocation	USN-20	As an admin, I must allot particular person to look after the leakage in a particular location.	3	High	Surendar Muthupandi

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		29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022		05 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022		12 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022		19 Nov 2022

Velocity:

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

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)