Project Planning Phase

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

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| Date | 26 October 2022 |
| Team ID | PNT2022TMID13705 |
| Project Name | Project – Gas Leakage Monitoring and Alerting System |
| Maximum Marks | 8 Marks |

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

Use the below template to create product backlog and sprint schedule

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| **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 | Deva |
| Sprint-1 | Features | USN-2 | As a system, the gas sensor values should be  displayed in a LCD screen | 2 | Low | Harini |
| 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 | Dhivyan |
| 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 | Bhavan |
| Sprint-2 | Focus | USN-5 | As a system, it should the send the location  where the gas is detected | 8 | High | Dhivyan |
| Sprint-2 | Focus | USN-6 | As a system, it should also send the alerting  SMS to the registered phone number | 2 | Low | Bhavan |

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| **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 | Deva |
| 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 | Harini |
| 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 | Deva |
| 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 | Harini |
| Sprint-3 | Data Transfer | USN-11 | As a cloud system, the IBM cloud should send the data to NodeRed | 2 | Medium | Dhivyan |
| 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 | Bhavan |
| 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 | Harini |
| Sprint-4 | Registration | USN-14 | As a user, I must first register my email and mobile number in the website | 2 | High | Harini |

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| **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 | Deva |
| Sprint-4 | Login | USN-16 | As a user, I can login into the web application  through email and password. | 3 | High | Dhivyan |
| Sprint-4 | Dashboard | USN-17 | As a user, I can access the dashboard and make use of available resources. | 2 | Medium | Harini |
| Sprint-4 | Focus | USN-18 | As a user, I must receive an SMS once the  leakage is detected. | 5 | High | Bhavan |
| Sprint-4 | Allocation | USN-19 | As an admin, I must receive information about the leakage along with location and share exact location and route to the person. | 3 | High | Dhivyan |
| Sprint-4 | Allocation | USN-20 | As an admin, I must allot particular person to  look after the leakage in a particular location. | 3 | High | Bhavan |

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

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| **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:

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)



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](https://www.visual-paradigm.com/scrum/what-is-agile-software-development/) methodologies such as [Scrum](https://www.visual-paradigm.com/scrum/scrum-in-3-minutes/). However, burn down charts can be applied to any project containing measurable progress over time.

<https://www.visual-paradigm.com/scrum/scrum-burndown-chart/> <https://www.atlassian.com/agile/tutorials/burndown-charts>

Reference:

<https://www.atlassian.com/agile/project-management> <https://www.atlassian.com/agile/tutorials/how-to-do-scrum-with-jira-software> <https://www.atlassian.com/agile/tutorials/epics> <https://www.atlassian.com/agile/tutorials/sprints> <https://www.atlassian.com/agile/project-management/estimation> <https://www.atlassian.com/agile/tutorials/burndown-charts>