**Project Planning Phase**

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

|  |  |
| --- | --- |
| Date | 18 October 2022 |
| Team ID | PNT2022TMID44629 |
| Project Name | Gas leakage monitoring and alerting system using IOT |
| 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 / Task** | **Story Points** | **Priority** | **Team Members** |
| --- | --- | --- | --- | --- | --- |
| Sprint-1 | Related work | Introduced GSM based gas leakage detection system in which the GSM module is introduced for wireless alert and gas leakage detection ,efficiently implemented. | 2 | High | KAVIYANJALI P  EZHILARASI S  SANGEETHA A  THENMOZHI S |
| Sprint-1 | Proposed method | Send alert SMS to the in charge of the plant whose number is saved in SIM card by using GSM modem. | 2 | High | KAVIYANJALI P  EZHILARASI S  SANGEETHA A  THENMOZHI S |
| Sprint-2 | Hardware description | Arduino UNO, Gas leakage sensor, GSM module, Buzzer, LCD these hardware are used to monitor and alerting purpose . | 1 | Low | KAVIYANJALI P  EZHILARASI S  SANGEETHA A  THENMOZHI S |
| Sprint-3 | Software implementation | This system monitors the gas, smoke by sensor. If any gas is detected the signal of sensor goes low and activate the Arduino UNO. This is send to LCD display. | 1 | Medium | KAVIYANJALI P  EZHILARASI S  SANGEETHA A  THENMOZHI S |
| Sprint-4 | Result and discussion | Buzzer and GSM modem alerts the people who are present in the danger place. | 2 | High | KAVIYANJALI P  EZHILARASI S  SANGEETHA A  THENMOZHI S |

**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 | 31 Oct 2022 |
| Sprint-3 | 20 | 6 Days | 07 Nov 2022 | 12 Nov 2022 | 20 | 7 Oct 2022 |
| Sprint-4 | 20 | 6 Days | 14 Nov 2022 | 19 Nov 2022 | 20 | 14 Oct 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)



Figure 1

Burndown chart

**Balance work**

100

75

Work remaining 50

25

0   
 **| | | | |**

START SPRINT 1 SPRINT 2 SPRINT 3 SPRINT 4

Burndown chart

**Balance work**

100

75

Work remaining 50

25

0   
 **| | | | |**

START SPRINT 1 SPRINT 2 SPRINT 3 SPRINT 4