**Project Planning Phase**

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

|  |  |
| --- | --- |
| Date | 18 October 2022 |
| Team ID | PNT2022TMID47541 |
| Project Name | IoT Based Smart Crop Protection System for Agriculture |
| 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**  **Number** | **User Story / Task** | **Story Points** | **Priority** | **Team**  **Members** |
| Sprint-1 | Watering plant | USN-1 | As a user, I can water the plant by pressing the button in the application installed in the mobile | 3 | Medium | Premnath ,  Tata Pravin |
| Sprint-1 |  | USN-2 | As a user, I automate the process of watering the plant | 4 | High | Manikandan ,  Gunaseelan |
| Sprint-1 |  | USN-3 | As a user, I can water the plant using rain water harvesting | 4 | High | Tata Pravin , Gunaseelan |
| Sprint-1 |  | USN-4 | As a user, I can water the plants using the ground water if the water saved in the tank is empty | 2 | Low | Vikram ,  Gunaseelan |
| Sprint-2 | Monitoring Field | USN-5 | As a user, I can monitor the weather condition | 4 | High | Gunaseelan |
| Sprint-2 |  | USN-6 | As a user, I can monitor the movement of animals and birds in the agricultural land | 2 | High | Premnath ,  Tata Pravin |
| Sprint-3 | Weather Prediction | USN-7 | As a user, I can predict the weather condition | 2 | Medium | Gunaseelan |
|  |  |  |  |  |  |  |
| **Sprint** | **Functional**  **Requirement (Epic)** | **User Story**  **Number** | **User Story / Task** | **Story Points** | **Priority** | **Team**  **Members** |
| Sprint-4 | Notification | USN-8 | As a user, I can register myself to get notification | 3 | High | Gunaseelan ,  Premnath ,  Tata Pravin |

**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 | 30 Oct 2022 | 04 Nov 2022 | 20 | 04 Nov 2022 |
| Sprint-3 | 20 | 6 Days | 05 Nov 2022 | 10 Nov 2022 | 20 | 10 Nov 2022 |
| Sprint-4 | 20 | 6 Days | 11 Nov 2022 | 16 Nov 2022 | 20 | 16 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)



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**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.

Step 1: Create Estimate Effort

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Day1 | Day2 | Day3 | Day4 | Day5 | Day6 |
| Effort  Remaining | 50 | 40 | 33 | 20 | 10 | 0 |

Step 2: Track Daily Process

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sprint | Hours | Day1 | Day2 | Day3 | Day4 | Day5 | Day6 | Total |
| Sprint 1 | 10 | 3 | 2 | 2 | 1 | 1 | 1 | 10 |
| Sprint 2 | 10 | 2 | 2 | 2 | 2 | 1 | 1 | 10 |
| Sprint 3 | 10 | 1 | 1 | 1 | 3 | 2 | 2 | 10 |
| Sprint 4 | 10 | 2 | 2 | 3 | 1 | 1 | 1 | 10 |

Step 3: Compute the Actual

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Day1 | Day2 | Day3 | Day4 | Day5 | Day6 |
| Actual Effort | 50 | 34 | 25 | 20 | 10 | 0 |
| Effort  Remaining | 50 | 40 | 33 | 15 | 8 | 0 |

Step 4: Burndown Chart

0

10

20

30

40

50

60

Day1

Day2

Day3

Day4

Day5

Day6

Effort

Burndown Chart

Actual Effort

Effort Remaining