**PROJECT PLANNING PHASE**

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| --- | --- |
| Date | 07 November 2022 |
| Team ID | PNT2022TMID17561 |
| Project Name | Project - 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 a product backlog and sprint schedule

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sprint** | **Functional**  **Requirement (Epic)** | **User Story**  **Number** | **User Story / Task** | **Story Points** | **Priority** | **Team Members** |
| Sprint-1 |  | US-1 | Create the IBM Cloud services which are  being used in this project. | 6 | High | Arshad Parvez G  Lavanya M  KishoreKumar K  Mathuprakas R |
| Sprint-1 |  | US-2 | Configure the IBM Cloud services which are  being used in completing this project. | 4 | Medium | Arshad Parvez G  Lavanya M  KishoreKumar K  Mathuprakas R |
| Sprint-2 |  | US-3 | IBM Watson IoT platform acts as the mediator  to connect the web application to IoT devices,  so create the IBM Watson IoT platform. | 5 | Medium | Arshad Parvez G  Lavanya M  KishoreKumar K  Mathuprakas R |
| Sprint-2 |  | US-4 | In order to connect the IoT device to the IBM  cloud, create a device in the IBM Watson IoT  platform and get the device credentials. | 5 | High | Arshad Parvez G  Lavanya M  KishoreKumar K  Mathuprakas R |
| Sprint-3 |  | US-1 | Configure the connection security and create  API keys that are used in the Node-RED  service for accessing the IBM IoT Platform. | 10 | High | Arshad Parvez G  Lavanya M  KishoreKumar K  Mathuprakas R |
| Sprint-3 |  | US-2 | Create a Node-RED service. | 10 | High | Arshad Parvez G  Lavanya M  KishoreKumar K  Mathuprakas R |
| Sprint-3 |  | US-1 | Develop a python script to publish random sensor data such as temperature, moisture, soil and humidity to the IBM IoT platform | 7 | High | Arshad Parvez G  Lavanya M  KishoreKumar K  Mathuprakas R |
| Sprint-3 |  | US-2 | After developing python code, commands are received just print the statements which represent the control of the devices. | 5 | Medium | Arshad Parvez G  Lavanya M  KishoreKumar K  Mathuprakas R |
| Sprint-4 |  | US-3 | Publish Data to The IBM Cloud | 8 | High | Arshad Parvez G  Lavanya M  KishoreKumar K  Mathuprakas R |
| Sprint-4 |  | US-1 | Create Web UI in Node- Red | 10 | High | Arshad Parvez G  Lavanya M  KishoreKumar K  Mathuprakas R |
| Sprint-4 |  | US-2 | Configure the Node-RED flow to receive data from the IBM IoT platform and also use Cloudant DB nodes to store the received sensor data in the cloudant DB | 10 | High | Arshad Parvez G  Lavanya M  KishoreKumar K  Mathuprakas 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)



**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.

