

## PROJECT PLANNING PHASE

### SPRINT DELIVERY PLAN

|                |   |
|----------------|---|
| TEAM ID        | PNT2022TMID17061                                |
| PROJECT TITTLE | SMART CROP PROTECTION<br>SYSTEM FOR AGRICULTURE |
| MAXIMUM MARKS  | 8 MARKS   |

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

| SPRINT   | FUNCTIONAL<br>REQUIREMENT | USER<br>STORY<br>NUMBER | USER STORY/TASK  | STORY<br>POINTS | PRIORITY | TEAM<br>NUMBERS                                 |
|----------|---------------------------|-------------------------|--|-----------------|----------|---|
| Sprint-1 |                           | US-1                    | Create the IBM Cloud services which are being used in this project.  | 7               | high     | Pratheesha<br>Sowmiya<br>Vinisha<br>Thulasimani |
| Sprint-1 |                           | US-2                    | Create the IBM Cloud services which are being used in this project.  | 7               | high     | Pratheesha<br>Sowmiya<br>Vinisha<br>Thulasimani |
| 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   | Pratheesha<br>Sowmiya<br>Vinisha<br>Thulasimani |
| 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 | 6               | high     | Pratheesha<br>Sowmiya<br>Vinisha<br>Thulasimani |
| 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     | Pratheesha<br>Sowmiya<br>Vinisha<br>Thulasimani |
| Sprint-3 |                           | US-3                    | Create a Node-RED service  | 8               | high     | Pratheesha<br>Sowmiya<br>Vinisha<br>Thulasimani |
| Sprint-3 |                           | US-2                    | Develop a python script to publish random  | 6               | medium   | Pratheesha<br>Sowmiya                           |

|                 |  |      |   |   |      |   |
|-----------------|--|------|---|---|------|---|
|                 |  |      | sensor data such as temperature, moisture, soil and humidity to the IBM IoT platform  |   |      | Vinisha Thulasimani                       |
| <b>Sprint-3</b> |  | US-1 | After developing python code, commands are received just print the statements which represent the control of the devices.                                 | 8 | high | Pratheesha Sowmiya<br>Vinisha Thulasimani |
| <b>Sprint-4</b> |  | US-3 | Publish Data to The IBM Cloud   | 5 | high | Pratheesha Sowmiya<br>Vinisha Thulasimani |
| <b>Sprint-4</b> |  | US-2 | Create Web UI in Node- Red  | 8 | high | Pratheesha Sowmiya<br>Vinisha Thulasimani |
| <b>Sprint-4</b> |  | US-1 | 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 | 6 | high | Pratheesha Sowmiya<br>Vinisha Thulasimani |

**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                 | 6days    | 24 Oct 2022       | 29 Oct 2022               | 20  | 29 Oct 2022                  |
| Sprint-2 | 20                 | 6days    | 31 Oct 2022       | 05 Nov 2022               | 20  | 05 Nov 2022                  |
| Sprint-3 | 20                 | 6days    | 07 Nov 2022       | 12 Nov 2022               | 20  | 12 Nov 2022                  |
| Sprint-4 | 20                 | 6days    | 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)

$$AV=Sprint\ duration/velocity=20/10$$

A burndown chart is a graphical representation of work left to do versus time. However, burndown charts can be applied to any project containing measurable progress overtime.

