

Project Planning Phase

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| TeamID | PNT2022TMID41422 |
| ProjectName | IoTbasedSmartcrop ProtectionSystemforagriculture |
| MaximumMarks | 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 | IBM Cloud services | US-1 | Create the IBM Cloud services which are being used in this project. | 6 | High | Sharathy K Priyadharshini V Ramya S Roja M |
| Sprint-1 | IBM Cloud services | US-2 | Configure the IBM Cloud services which are being used in completing this project. | 4 | Medium | Sharathy K Priyadharshini V Ramya S Roja M |
| Sprint-2 | IBM Watson IoT platform | 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 | Sharathy K Priyadharshini V Ramya S Roja M |
| Sprint-2 | IBM Watson IoT platform | 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 | Sharathy K Priyadharshini V Ramya S Roja M |
| Sprint-3 | IBM Watson IoT platform & Node-RED service | 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 | Sharathy K Priyadharshini V Ramya S Roja M |

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Story Points | Priority | Team Members |
|---------------|--------------------------------------|--------------------------|---|---------------------|-----------------|---|
| Sprint-3 | Node-RED service | US-2 | Create a Node-RED service. | 10 | High | Sharathy K Priyadharshini V Ramya S Roja M |
| Sprint-3 | IBM IoT platform | 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 | Sharathy K Priyadharshini V Ramya S Roja M |
| Sprint-3 | IBM IoT platform | US-2 | After developing python code, commands are received just print the statements which represent the control of the devices. | 5 | Medium | Sharathy K Priyadharshini V Ramya S Roja M |
| Sprint-4 | IBM Cloud Services | US-3 | Publish Data to The IBM Cloud | 8 | High | Sharathy K Priyadharshini V Ramya S Roja M |
| Sprint-4 | Webpage | US-1 | Create Web UI in Node- Red | 10 | High | Sharathy K Priyadharshini V Ramya S Roja M |
| Sprint-4 | IBM IoT platform | 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 | Sharathy K Priyadharshini V Ramya S Roja M |

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)

$$AV = \frac{\textit{sprint duration}}{\textit{velocity}} = \frac{20}{10} = 2$$

Burndown Chart:

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.

