

Project Planning Phase

Date	4 November 2022
Team ID	PNT2022TMID51110
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		US-1	Develop the IBM Cloud services required for this project.	6	High	Shanmugavisal, Veeramanimaran, Subhash, Santhosh
Sprint-1		US-2	Set up the IBM Cloud services that will be used to finish this project.	4	Medium	Shanmugavisal, Veeramanimaran, Subhash, Santhosh
Sprint-2		US-3	The creation of the IBM Watson IoT platform serves as the intermediary between web applications and IoT devices.	5	Medium	Shanmugavisal, Veeramanimaran, Subhash, Santhosh
Sprint-2		US-4	Create a device in the IBM Watson IoT platform and obtain the device credentials to connect the IoT device to the IBM cloud.	5	High	Shanmugavisal, Veeramanimaran, Subhash, Santhosh
Sprint-3		US-1	Create API keys and configure connection security for the Node-RED service to use when connecting to the IBM IoT Platform.	10	High	Shanmugavisal, Veeramanimaran, Subhash, Santhosh
Sprint-3		US-2	Create a Node-RED service.	10	High	Shanmugavisal, Veeramanimaran, Subhash,

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
						Santhosh
Sprint-3		US-1	Create a Python script to upload arbitrary sensor data to the IBM IoT platform, including temperature, wetness, soil moisture, and humidity.	7	High	Shanmugavisal, Veeramanimaran, Subhash, Santhosh
Sprint-3		US-2	Following the development of Python code, commands simply output the statements that describe device control.	5	Medium	Shanmugavisal, Veeramanimaran, Subhash, Santhosh
Sprint-4		US-3	Post Information to the IBM Cloud	8	High	Shanmugavisal, Veeramanimaran, Subhash, Santhosh
Sprint-4		US-1	Create Web UI in Node- Red	10	High	Shanmugavisal, Veeramanimaran, Subhash, Santhosh
Sprint-4		US-2	Set up the Cloudant DB nodes to store the incoming sensor data in the Cloudant DB and the Node-RED flow to receive data from the IBM IoT platform.	10	High	Shanmugavisal, Veeramanimaran, Subhash, Santhosh

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)
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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)

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

Burndown Chart:

A burndown chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burndown charts can be applied to any project containing measurable progress overtime.

