

# Project Planning Phase

**TITLE** : IoT based smart crop protection system for agriculture

**DOMAIN NAME** : Internet Of Things

**TEAM LEADER** : Akash Selvin S

**TEAM MEMBER** :Akash Selvin S

Derish Kenimer

Joffin V

Rana Prathap

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

Use the below template to create product backlog and sprint schedule

<b>Sprint</b>	<b>Functional Requirement (Epic)</b>	<b>User Story Number</b>	<b>User Story / Task</b>	<b>Story Points</b>	<b>Priority</b>	<b>Team Members</b>
Sprint-1		US-1	Create the IBM Cloud services which are being used in this project.	6	High	Akash Selvin S Derish Kenimer Joffin V Rana Prathap
Sprint-1		US-2	Configure the IBM Cloud services which are being used in completing this project.	4	Medium	Akash Selvin S Derish

						Kenimer Joffin V Rana Prathap
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<b>Sprint</b>	<b>Functional Requirement (Epic)</b>	<b>User Story Number</b>	<b>User Story / Task</b>	<b>Story Points</b>	<b>Priority</b>	<b>Team Members</b>
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	Akash Selvin S Derish Kenimer Joffin V Rana Prathap
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	Akash Selvin S Derish Kenimer Joffin V Rana Prathap
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	Akash Selvin S Derish Kenimer Joffin V Rana Prathap
Sprint-3		US-2	Create a Node-RED service.	10	High	Akash Selvin S Derish Kenimer Joffin V Rana Prathap

Sprint-3		US-1	Develop a system which will sensor the animals entry into the fields and intimate the farmers.	7	High	Akash Selvin S Derish Kenimer Joffin V Rana Prathap
Sprint-3		US-2	After developing python code, commands are received just print the statements which represent the control of the devices.	5	Medium	Akash Selvin S Derish Kenimer Joffin V Rana Prathap
Sprint-4		US-3	Publish Data to The IBM Cloud	8	High	Akash Selvin S Derish Kenimer Joffin V Rana Prathap
Sprint-4		US-1	Create Web UI in Node- Red	10	High	Akash Selvin S Derish Kenimer Joffin V Rana Prathap
Sprint-4		US-2	Configure the Node-RED flow to receive	10	High	Akash Selvin S Derish Kenimer Joffin V

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
			data from the IBM IoT platform and also use Cloudant DB nodes to store the received sensor data in the cloudant DB			Akash Selvin S  Derish Kenimer  Joffin V  Rana Prathap

#### 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	25 Oct 2022	30 Oct 2022	20	30 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	05 Nov 2022
Sprint-3	20	6 Days	09 Nov 2022	14 Nov 2022	20	14 Nov 2022
Sprint-4	20	6 Days	16 Nov 2022	21 Nov 2022	20	21 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. 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.

