

## **Project Planning phase**

### **Project Planning Template (Product backlog, Sprint Planning, Stories, Story points)**

<b>Date</b>	<b>26 October 2022</b>
<b>Team ID</b>	<b>PNT2022TMID25985</b>
<b>Project Name</b>	<b>Real time river water quality monitoring and control system</b>
<b>Maximum Marks</b>	<b>8 Marks</b>

### **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	Registration	USN-1	As a user, I can register for the application by entering my email, password and confirming my password	2	High	Ezhil Pooja Varshini V, Kaviya T, Malathi Y, Mathuligha P
Sprint-1	Registration Via Facebook	USN-2	As a user, I can register for the application through Facebook	2	Low	Ezhil Pooja Varshini V, Kaviya T, Malathi Y, Mathuligha P
Sprint-1	Registration via Gmail	USN-3	As a user, I can register for the application through Gmail	2	Medium	Ezhil Pooja Varshini V, Kaviya T, Malathi Y, Mathuligha P
Sprint-2	Confirmation	USN-4	As a user, I will receive confirmation email once I have registered for the application	1	High	Ezhil Pooja Varshini V, Kaviya T, Malathi Y, Mathuligha P
Sprint-2	Login	USN-5	As a user, I can log into the application by entering email and password	1	High	Ezhil Pooja Varshini V, Kaviya T, Malathi Y, Mathuligha P
Sprint-2	IBM Cloud service	USN-6	Get access to IBM Cloud Services	2	High	Ezhil Pooja Varshini V, Kaviya T, Malathi Y, Mathuligha P

Sprint	Functional Requirement (Epic)	User Story Number	User Story/Task	Story Points	Priority	Team members
Sprint-3	Create IBM Watson and Device settings	USN-7	To create IBM Watson IoT platform and integrate the microcontroller with it to send sensed data to cloud	2	High	Ehil Pooja Varshini V, Kaviya T, Malathi Y, Mathuligha P
Sprint-3	Create Node-Red service	USN-8	To create a NODE-RED service to integrate the IBM Watson along with Web UI	2	Medium	Ehil Pooja Varshini V, Kaviya T, Malathi Y, Mathuligha P
Sprint-3	Create Web UI	USN-9	To create Web UI to access the data from cloud and display all parameters	2	Medium	Ehil Pooja Varshini V, Kaviya T, Malathi Y, Mathuligha P
Sprint-3	To develop a python code	USN-10	Create Python code to sense the physical quantity and store the data	1	Medium	Ehil Pooja Varshini V, Kaviya T, Malathi Y, Mathuligha P
Sprint-4	Publish data to IBM cloud	USN-11	Publish data that is sensed by the microcontroller to the cloud	3	High	Ehil Pooja Varshini V, Kaviya T, Malathi Y, Mathuligha P
Sprint-4	Fast SMS service	USN-12	Use fast SMS to send alert message once the parameters like ph, turbidity and temperature goes beyond the threshold	3	High	Ehil Pooja Varshini V, Kaviya T, Malathi Y, Mathuligha P
Sprint-4	Testing	USN-13	Testing of project and final deliverables	3	Medium	Ehil Pooja Varshini V, Kaviya T, Malathi Y, Mathuligha P

**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).

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

### **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 over time.

Burndown Chart

