

**Project Planning Phase**  
**Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)**

Date	1 NOVEMBER 2022
Team ID	<b>PNT2022TMID43902</b>
Project Name	<b>IOT ENABLED – REAL TIME WATER QUALITY MONITORING AND CONTROL SYSTEM</b>
Maximum Marks	8 Marks

**Product Backlog, Sprint Schedule, and Estimation (4 Marks):**

<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	Nikil Sandeep D, Rakesh A
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	Nikil Sandeep D, Rakesh A
Sprint-2		USN-3	As a user, I can register for the application through Facebook	2	Low	Nikil Sandeep D, Rakesh A
Sprint-1		USN-4	As a user, I can register for the application through Gmail	2	Medium	Nikil Sandeep D, Rakesh A
Sprint-1	Login	USN-5	As a user, I can log into the application by entering email & password	1	High	Nikil Sandeep D, Rakesh A
	Dashboard				High	Nikil Sandeep D, Rakesh A

<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	User interface experience	USN-6	As a user I need a proper user interface for the project which was contain the graphical representation of received data from the sensors	2	High	Nikil Sandeep D, Rakesh A
Sprint -2		USN-7	As a user, I can create a IBM cloud account for the data base which should able to store the data and gather the data from the sensors	1	Medium	Nikil Sandeep D, Rakesh A
Sprint -2		USN-8	As I a user I can create node-red app for providing commands to the sensors in the IBM cloud	2	Medium	Nikil Sandeep D, Rakesh A
Sprint -2		USN-9	As a user, I can create IOT Watson assistant for converting the sensors data to the digital data	2	Low	Nikil Sandeep D, Rakesh A, Pravin M
Sprint -2		USN-10	As a user, I can create a fast to SMS app For providing alert the user which consuming water was not have the quality of consumable	1	High	Nikil Sandeep D, Rakesh A, Pravin M
Sprint -2		USN-11	As I a user, I can make cloudant data base in the IBM cloud for storing the data from the sensors for future references	2	High	Nikil Sandeep D, Rakesh A, Pravin M
Sprint -3	App interface creation	USN-12	As I a user, I can use the MIT APP INVERTER for creating the user interface which contains interface between of IBM cloud	1	Medium	Nikil Sandeep D, Rakesh A, Adhavan D
Sprint -3		USN-13	As I am a user, I can create a dashboard which was containing graphical representing the sensors measurements	1	Medium	Nikil Sandeep D, Rakesh A, Adhavan D

Sprint -3		USN-14	As I am a user, I can save or delete the previous measurements which was contain the sensor measurements	2	High	Nikil Sandeep D, Rakesh A, Pravin M
Sprint -3		USN-15	As I am a user, I need the devices was properly insulated and the devices was must be a water resistant	2	High	Nikil Sandeep D, Rakesh A, Adhavan D
Sprint -3		USN-16	As I am a user, I can create the devices which was implemented in the project should be	1	Low	Nikil Sandeep D, Rakesh A

<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>
			maintain properly with the particular interval of time			
Sprint -3		USN-17	As I am a user, I need a simultaneous data collecting data from the sensors and also save the received data to the cloudant /cloud dashboard	2	Low	Nikil Sandeep D, Rakesh A
Sprint -3		USN-18	As a user, I can manage the devices which was implemented in the project	1	High	Nikil Sandeep D, Rakesh A
Sprint -3	User development	USN-19	As a admin, I can manage all the devices and find the drawbacks and also rectify that	1	High	Nikil Sandeep D, Rakesh A
Sprint -3		USN-20	As a admin, I can manage the devices which was not working not properly I should replace that device	1	Medium	Nikil Sandeep D, Rakesh A
Sprint -3		USN-21	As a admin, I can monitor the devices which was sending the correct data or not	1	Low	Nikil Sandeep D, Rakesh A, Pravin M
Sprint -3		USN-22	As a admin, I can make changes in the user interface which was able to understand the measurements was easily understandable by user/industry person	2	High	Nikil Sandeep D, Rakesh A
Sprint -4	User command centre	USN-23	As a admin, I can create the command option in the user interface and able to perform the devices based on the commands	2	High	Nikil Sandeep D, Rakesh A, Pravin M
Sprint -4		USN-24	As a user, I can give the command to the device which was already able understand the command and also perform the function which was mention in the command	2	Medium	Nikil Sandeep D, Adhavan D, Pravin M
Sprint -4		USN-25	As a user, I can need user interface was always be an eco-friendly which was designed in the user interface	2	Medium	Nikil Sandeep D, Adhavan D, Pravin M

Sprint -4		USN-26	As a user, I need a user interface which was contains HTTP command format and also should contain the web page interface	1	High	Nikil Sandeep D, Adhavan D, Pravin M
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Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint -4		USN-27	As a user, I can make the measurements was also capable to know the web interface	1	Low	Nikil Sandeep D, Rakesh A, Pravin M
Sprint -4		USN-28	As a user, I need a proper statement of the measurements of the data and also	1	Low	Nikil Sandeep D, Adhavan D, Pravin 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	01 Nov 2022	06 Nov 2022	20	06 Nov 2022
Sprint-2	20	6 Days	07 Nov 2022	12 Nov 2022	20	12 Nov 2022
Sprint-3	20	6 Days	13 Nov 2022	18 Nov 2022	20	18 Nov 2022
Sprint-4	20	6 Days	19 Nov 2022	24 Nov 2022	20	24 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)

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

**The average velocity (AV) per iteration unit =3.33**

### **Burndown Chart:**

A burn down 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, burn down charts can be applied to any project containing measurable progress over time.

