Project Planning Phase

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

Date	20 October 2022
Team ID	PNT2022TMID10977
Project Name	Real Time River Quality Monitoring and Control System.
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	Procurement of Hardware requirements (if needed)	USN-1	Procurement of quality sensors and actuators, microcontroller that will be required to sense the physical parameters like pH, turbidity and Temperature.	2	High	Deepika S Jovita Arokiarani A.A Jayasri R.S Jayashree R
	Create IBM Cloud Services	USN-2	Creation of an IBM Cloud account and registering a device.	2	High	
	Configure the IoT device in IBM Cloud.	USN-3	Creation and registering of a device	1	Medium	
Sprint-2	Development of Python code in IDLE, Install all required libraries.	USN-4	To develop the Python Code to generate random values of pH ,Temperature and turbidity values along with their units.	1	Medium	

	Create a IBM Watson IoT service and Publish the values generated by python code to Cloud.	USN-5	To create the IBM Watson IoT Platform and integrate the microcontroller with it, to send the sensed data on cloud	1	High	
Sprint-3	Create a Node Red Service	USN-6	To create a node red service to integrate the IBM Watson along with the Web UI	2	Medium	Deepika S Jovita Arokiarani A.A Jayasri R.S Jayashree R.

	Create a Web UI	USN-7	To create a Web UI, to access the data from the cloud and display all parameters.	2	Medium	Deepika S Jovita Arokiarani A.A Jayasri R.S Jayashree R
	Generate a link to Interface the node red service with the Web UI/Mobile app	USN-8	Generate Link to interface the services.	3	High	Deepika S Jovita Arokiarani A.A Jayasri R.S Jayashree R
Sprint-4	Design a Mobile App, to display pH, Temperature and turbidity values	USN-9	To design a Android App using MIT App inventor, to display pH, Temperature and turbidity values.	2	High	Deepika S Jovita Arokiarani A.A Jayasri R.S Jayashree R
	Fast-SMS Service	USN-10	Use Fast SMS to send alert messages once the parameters like pH, Turbidity and temperature goes beyond the threshold	3	High	Deepika S Jovita Arokiarani A.A Jayasri R.S Jayashree R
	Product Testing	USN-11	Testing of project and final deliverables	3	Medium	

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	15	6 Days	24 Oct 2022	31 Oct 2022	15	31 Oct 2022
Sprint-2	15	6 Days	1 Nov 2022	07 Nov 2022	15	07 Nov 2022
Sprint-3	10	6 Days	08 Nov 2022	13 Nov 2022	10	13 Nov 2022
Sprint-4	10	6 Days	14 Nov 2022	20 Nov 2022	10	20 Nov 2022

Velocity:

Sprint-1 and Sprint-2

$$AV = \frac{Velocity}{Sprint\ duration} = \frac{15}{7} = 2.14$$

Sprint-3 and Sprint-4

$$AV = \frac{Velocity}{Sprint\ duration} = \frac{10}{} = 1.6$$