Project Planning Phase

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

Date	22 October 2022
Team ID	PNT2022TMID42440
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	GAYATHRI.M, KARTHIKA.K
	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 the Python code in IDLE, Install all required libraries like ibmiotf.	USN-4	To develop the Python Code to generate random values of pH ,Temperature and turbidity values along with their units.	1	Medium	GAYATHIRI VARSHINI.R, KAVIYA.S, KANNIKA.C
	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	KANNIKA.C

	Create a Web UI	USN-7	To create a Web UI, to access the data from the cloud and display all parameters.	2	Medium	GAYATHIRI VARSHINI.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	GAYATHRI.M
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	KARTHIKA
	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	KAVIYA,S
	Product Testing	USN-11	Testing of project and final deliverables	3	Medium	GAYATHRI.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	24 Oct 2022	30 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	5 Nov 2022	40	06 Nov 2022
Sprint-3	20	6 Days	5 Nov 2022	12 Nov 2022	60	12 Nov 2022
Sprint-4	20	6 Days	12 Nov 2022	19 Nov 2022	80	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)

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

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