Project Planning Phase
Sprint Delivery Plan (Product Backlog, Sprint Planning, Stories, Story points)

Date	29 October 2022
Team ID	PNT2022TMID12777
Project Name	Project – Realtime River Water Quality Monitoring and Control system
Maximum Marks	8 Marks

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

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Data Collection	USN-1	Setting the circuit using any simulation software like Wokwi, TinkerCAD, etc.,	5	High	Kiruba Shankari L & Swetha S
Sprint-1	Data Collection	USN-2	The data is then collected for various use cases from best to normal to worst condition.	5	High	Kiruba Shankari L & Swetha S
Sprint-1	Data Collection	USN-3	The data is then sent to the cloud to be retrieved at the other end.	5	High	Kiruba Shankari L & Swetha S

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Data Collection	USN-4	The user will collect the data from the other end.	5	High	Kiruba Shanakari L & Swetha S
Sprint-2	Data Selection	USN-5	The user at the river / pond side will publish the data in the name of temperature / pH / Turbidity. Also, in the name of the location for easy retrieval.	5	High	Praveen S & Sakthi J
Sprint-2	Data Selection	USN-6	The user uses MQTT protocol to establish the Publish-Subscriber model.	5	High	Praveen S & Sakthi J
Sprint-2	Data Selection	USN-7	The user will subscribe the data according to the place he desires to concentrate.	5	High	Praveen S & Sakthi J
Sprint-3	Data Retrieval	USN-8	The user subscribes for a particular entity and this will be purely on his desire.	5	Medium	Swetha S & Sakthi J
Sprint-3	Data Retrieval	USN-9	The data is then collected and processed because it'll be a raw data and had to be pre-processed before using for any comparison.	5	High	Swetha S & Sakthi J
Sprint-4	Data Comparison	USN-10	The pre-processed data is then compared with standard values or threshold values	5	High	Kiruba Shankari L & Praveen S

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-4	Data Comparison	USN-11	The comparison of data takes place through NodeRED platform which provides	5	High	Kiruba Shankari L & Praveen S
Sprint-4	Data Comparison	USN-12	The comparison is made in such a way that if there's any discrepancies.	5	Medium	Kiruba Shankari L & Praveen S
Sprint-4	Data Display	USN-13	Web UI is created to provide a better visualization and better appealing of the data.	5	High	Kiruba Shankari L & Praveen S
Sprint-4	Data Display	USN-14	The Web UI created should be made such that it is compatible for to be used in SMS.	5	Medium	Kiruba Shankari L & Praveen S
Sprint-4	Data Display	USN-15	The data is then sent through Fast2SMS to provide the information as a SMS	5	High	Kiruba Shankari L & Praveen S
Sprint-4	Data Display	USN-16	If there's any discrepancy alarm can be raised using a buzzer.	5	Low	Kiruba Shankari L & Praveen S

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	04 Nov 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	15	12 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	10	14 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	25	19 Nov 2022

Velocity:

$$\text{AV} = \frac{\text{Sprint Duration}}{\text{Velocity}} = \frac{20 + 15 + 10 + 25}{4} = 17.5$$

Though we have only 4 Sprints it is estimated that 4.6 sprints are required to complete the task.

Burndown Chart:

Sprint	Goal	Done	Goal velocity	Remaining
1	20	0	20	0
2	20	0	15	5
3	20	0	10	10
4	20	0	25	10