

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

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| Date | 20 October 2022 |
| Team ID | PNT2022TMID36156 |
| Project Name | Project- 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 | Registration | USN-1 | As a user, I can register for the application by entering my email, password, and confirming My password. | 2 | High | Naresh Kumar Logeshwer |
| | Registration via Facebook | USN-3 | As a user, I can register for the application through Facebook | 2 | Low | Yuvaraj, Srinivasan |
| | Registration via Mail ID | USN-4 | As a user, I can register for the application through Gmail | 2 | Medium | |
| Sprint-2 | Confirmation | USN-2 | As a user, I will receive confirmation email once I have registered for the application | 1 | High | Yuvaraj, Srinivasan |
| | Login | USN-5 | As a user, I can log into the application by entering email & password | 1 | High | |
| | IBM Cloud service Access | | Get access to IBM cloud services. | 2 | High | |
| Sprint-3 | Create the IBM Watson IoT and device Settings | USN-6 | To create the IBM Watson IoT Platform and integrate the microcontroller with it, to send the sensed data on Cloud | 2 | High | Logeshwer, Srinivasan Naresh Kumar |

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|--|---------------------------|-------|---|---|--------|---------------------|
| | Create a node red service | USN-7 | To create a node red service to integrate the IBM Watson along with the Web UI | 2 | medium | Yuvaraj, Srinivasan |
| | Create a Web UI | USN-8 | To create a Web UI, to access the data from the cloud and display all parameters. | 2 | Medium | Logeshwer |
| | To develop a Python code | USN-9 | Create a python code to sense the physical quantity and store data. | 2 | Medium | Naresh Kumar |

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|----------|------------------------|--------|--|---|--------|---|
| | | | | | | Naresh Kumar |
| | Publish Data to cloud. | USN-10 | Publish Data that is sensed by the microcontroller to the Cloud | 3 | High | Logeshwer |
| Sprint-4 | Fast-SMS Service | USN-11 | Use Fast SMS to send alert messages once the parameters like pH, Turbidity and temperature goes beyond the threshold | 3 | High | Logeshwer Srinivasan Naresh Kumar |
| | Testing | USN-12 | Testing of project and final deliverables | 3 | Medium | Yuvaraj |

Project Tracker, Velocity & Burn down 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 | 4 Days | 24 Oct 2022 | 27 Oct 2022 | 20 | 29 Oct 2022 |
| Sprint-2 | 20 | 5 Days | 28 Oct 2022 | 01 Nov 2022 | 20 | 04 Nov 2022 |
| Sprint-3 | 20 | 8 Days | 02 Nov 2022 | 09 Nov 2022 | 20 | 11 Nov 2022 |
| Sprint-4 | 20 | 9 Days | 10 Nov 2022 | 18 Nov 2022 | 20 | 19 Nov 2022 |
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Velocity:

Imagine we have 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 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.

Burndown Chart

