**Project Planning Phase**

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

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| --- | --- |
| Date | 4 November 2022 |
| Team ID | PNT2022TMID46761 |
| Project Name | Real Time River Quality Monitoring and Control System. |
| Maximum Marks | 8 Marks |

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sprint** | **Functional**  **Requirement (Epic)** | **User**  **Story**  **Numb**  **er** | **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 | Santhosh  Selvaganapathy  Ruthra Kumar  Mithun |
| Registration via facebook | USN-3 | As a user, I can register for the application through Facebook | 2 | Low |
| 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 |
| Login | USN-5 | As a user, I can log into the application by entering email & password | 1 | High |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 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 dataon cloud | | 2 | | High | | Santhosh  Selvaganapathy  Ruthra Kumar  Mithun | |
| 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 | | Ruthra Kumar  Mithun | |
| Create a Web UI | | USN-8 | | To create a Web UI, to access the data from the cloud and display all parameters. | | 2 | | Medium | | Santhosh  Selvaganapathy | |
| To develop a  Python code | | USN-9 | | Create a python code to sense the physical quantity and store data. | | 2 | | Medium | | Selvaganapathy  Ruthra Kumar | |
|  | |  | |  | |  | |  | |  | |  | |
| Publish Data to cloud. | | USN-10 | | Publish Data that is sensed by the microcontroller to the Cloud | | 3 | | High | | Santhosh  Selvaganapathy  Ruthra Kumar  Mithun | |
| 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 | | Santhosh  Selvaganapathy  Ruthra Kumar  Mithun | |
|  | | Testing | | USN -12 | | 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 | 20 | 2 Days | 24 Oct 2022 | 26 Oct 2022 | 20 | 29 Oct 2022 |
| Sprint-2 | 20 | 4 Days | 26 Oct 2022 | 30 Oct 2022 | 40 |  |
| Sprint-3 | 20 | 12 Days | 1 Nov 2022 | 12 Nov 2022 | 60 |  |
| Sprint-4 | 20 | 6 Days | 13 Nov 2022 | 19 Nov 2022 | 80 | 14 Oct 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)



**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.

