**Project Planning Phase**

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

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| Date | 18 October 2022 |
| Team ID | PNT2022TMID23214 |
| Project Name | Real Time River Water Quality Monitoring and Control System |
| Maximum Marks | 8 Marks |

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

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| **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 | Kaviya Gobika |
| Sprint-1 |  | USN-2 | As a user, I will receive confirmation email once I have registered for the application | 1 | High | Kavipriya Brundhalakshmi |
| Sprint-1 |  | USN-3 | As a user, I can register for the application through Facebook | 2 | Low | Kaviya Brundhalakshmi |
| Sprint-1 |  | USN-4 | As a user, I can register for the application through Gmail | 2 | Medium | Gobika Kavipriya |
| Sprint-1 | Login | USN-5 | As a user, I can log into the application by entering email & password | 1 | High | Kaviya Brundhalakshmi |
|  | Dashboard |  |  |  | High |  |

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| **Sprint** | **Functional Requirement (Epic)** | **User Story Number** | **User Story / Task** | **Story Points** | **Priority** | **Team Members** |
| Sprint -2 | User interface experience | USN-6 | As a user I need a proper user interface for the project which was contain the graphical  representation of received data from the sensors | 2 | High | Kavipriya Kaviya |
| Sprint -2 |  | USN-7 | As a user, I can create a IBM cloud account for the data base which should able to store the data  and gather the data from the sensors | 1 | Medium | Gobika Brundhalakshmi |
| Sprint -2 |  | USN-8 | As I a user I can create node-red app for  providing commands to the sensors in the IBM cloud | 2 | Medium | Brundhalakshmi Kaviya  Gobika |
| Sprint -2 |  | USN-9 | As a user, I can create IOT Watson assistant for converting the sensors data to the digital data | 2 | Low | Gobika Kavipriya  Kaviya |
| Sprint -2 |  | USN-10 | As a user, I can create a fast to SMS app For  providing alert the user which consuming water was not have the quality of consumable | 1 | High | Kaviya Brundhalakshmi |
| Sprint -2 |  | USN-11 | As I a user, I can make cloudant data base in the  IBM cloud for storing the data from the sensors for future references | 2 | High | Gobika Kaviya |
| Sprint -3 | App interface creation | USN-12 | As I a user, I can use the MIT APP INVERTER  for creating the user interface which contains interface between of IBM cloud | 1 | Medium | Kavipriya  Gobika Brundhalakshmi |
| Sprint -3 |  | USN-13 | As I am a user, I can create a dashboard which  was containing graphical representing the sensors measurements | 1 | Medium | Brundhalakshmi Gobika |
| Sprint -3 |  | USN-14 | As I am a user, I can save or delete the previous measurements which was contain the sensor  measurements | 2 | High | Kavipriya Kaviya |
| Sprint -3 |  | USN-15 | As I am a user, I need the devices was properly insulated and the devices was must be a water  resistant | 2 | High | Gobika Kavipriya |
| Sprint -3 |  | USN-16 | As I am a user, I can create the devices which was implemented in the project should be | 1 | Low | Brundhalakshmi Kaviya |

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| **Sprint** | **Functional Requirement (Epic)** | **User Story Number** | **User Story / Task** | **Story Points** | **Priority** | **Team Members** |
|  |  |  | maintain properly with the particular interval of time |  |  |  |
| Sprint -3 |  | USN-17 | As I am a user, I need a simultaneous data collecting data from the sensors and also save the received data to the cloudant /cloud  dashboard | 2 | Low | Kaviya Kavipriya |
| Sprint -3 |  | USN-18 | As a user, I can manage the devices which was implemented in the project | 1 | High | Kaviya Gobika |
| Sprint -3 | User development | USN-19 | As a admin, I can manage all the devices and find the drawbacks and also rectify that | 1 | High | Brundhalakshmi Kaviya |
| Sprint -3 |  | USN-20 | As a admin, I can manage the devices which  was not working not properly I should replace that device | 1 | Medium | Gobika Kavipriya |
| Sprint -3 |  | USN-21 | As a admin, I can monitor the devices which was sending the correct data or not | 1 | Low | Gobika Kaviya |
| Sprint -3 |  | USN-22 | As a admin, I can make changes in the user interface which was able to understand the  measurements was easily understandable by user/industry person | 2 | High | Gobika Brundhalakshmi |
| Sprint -4 | User command centre | USN-23 | As a admin, I can create the command option in  the user interface and able to perform the devices based on the commands | 2 | High | Kavipriya Kaviya |
| Sprint -4 |  | USN-24 | As a user, I can give the command to the device which was already able understand the  command and also perform the function which was mention in the command | 2 | Medium | Kavipriya Gobika |
| Sprint -4 |  | USN-25 | As a user, I can need user interface was always  be an eco-friendly which was designed in the user interface | 2 | Medium | Kavipriya Brundhalakshmi |
| Sprint -4 |  | USN-26 | As a user, I need a user interface which was  contains HTTP command format and also should contain the web page interface | 1 | High | Kavipriya Kaviya |

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| **Sprint** | **Functional Requirement (Epic)** | **User Story Number** | **User Story / Task** | **Story Points** | **Priority** | **Team Members** |
| Sprint -4 |  | USN-27 | As a user, I can make the measurements was also capable to know the web interface | 1 | Low | Brundhalakshmi Kavipriya |
| Sprint -4 |  | USN-28 | As a user, I need a proper statement of the measurements of the data and also | 1 | Low | Brundhalakshmi Kaviya |

**Project Tracker, Velocity & Burndown Chart: (4 Marks)**

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| --- | --- | --- | --- | --- | --- | --- |
| **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 | 29 Oct 2022 |
| Sprint-2 | 20 | 6 Days | 31 Oct 2022 | 05 Nov 2022 | 20 | 05 Nov 2022 |
| Sprint-3 | 20 | 6 Days | 07 Nov 2022 | 12 Nov 2022 | 20 | 12 Nov 2022 |
| Sprint-4 | 20 | 6 Days | 14 Nov 2022 | 19 Nov 2022 | 20 | 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)



**The average velocity (AV) per iteration unit =3.33**

**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](https://www.visual-paradigm.com/scrum/what-is-agile-software-development/) methodologies such as [Scrum.](https://www.visual-paradigm.com/scrum/scrum-in-3-minutes/) However, burn down charts can be applied to any project containing measurable progress over time.

