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

| Date | 18 October 2022 |
|---|---|
| Team ID | PNT2022TMID10667 |
| Project Name | Smart Lender - Applicant Credibility Prediction for Loan Approval |
| 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 | User Registration and Login | USN-2 | To login the IBM account | 2 | High | Monica Jain. D Manjula.S Nishanthi.S Nishi Gilbert. G Nashiha Sulthana. G |
| Sprint-1 | | USN-3 | By providing my email address to access as an user | 2 | Low | Monica Jain. D Manjula.S Nishanthi.S Nishi Gilbert. G Nashiha Sulthana. G |
| Sprint-1 | Dataset | USN-4 | Download the dataset | 3 | Medium | Monica Jain. D Manjula.S Nishanthi.S Nishi Gilbert. G Nashiha Sulthana. G |
| Sprint-1 | | USN-5 | Visualize the dataset | 4 | High | Monica Jain. D Manjula.S Nishanthi.S Nishi Gilbert. G Nashiha Sulthana. G |
| Sprint-2 | Use Model | USN-6 | Pre-process the dataset | 4 | Medium | Monica Jain. D Manjula.S Nishanthi.S Nishi Gilbert. G Nashiha Sulthana. G |

| Sprint-2 | | USN-8 | Model the algorithm Decision Tree model building | 3 | High | Monica Jain. D<br>Manjula.S<br>Nishanthi.S<br>Nishi Gilbert. G<br>Nashiha Sulthana. G |
|---|---|---|---|---|---|---|
| Sprint-2 | | USN-8 | Xgboost model building | 3 | High | Monica Jain. D<br>Manjula.S<br>Nishanthi.S<br>Nishi Gilbert. G<br>Nashiha Sulthana. G |
| Sprint-2 | | USN-8 | Random forest building | 3 | High | Monica Jain. D<br>Manjula.S<br>Nishanthi.S<br>Nishi Gilbert. G<br>Nashiha Sulthana. G |
| Sprint-2 | | USN-8 | Decision Tree building | 3 | High | Monica Jain. D<br>Manjula.S<br>Nishanthi.S<br>Nishi Gilbert. G<br>Nashiha Sulthana. G |
| Sprint-2 | | USN-8 | KNN model building | 3 | High | Monica Jain. D<br>Manjula.S<br>Nishanthi.S<br>Nishi Gilbert. G<br>Nashiha Sulthana. G |
| Sprint-2 | | USN-9 | Fine Tuning the model | 4 | Medium | Monica Jain. D<br>Manjula.S<br>Nishanthi.S<br>Nishi Gilbert. G<br>Nashiha Sulthana. G |
| Sprint-2 | | USN-10 | Evaluation the models | 5 | High | Monica Jain. D<br>Manjula.S<br>Nishanthi.S<br>Nishi Gilbert. G<br>Nashiha Sulthana. G |
| Sprint-3 | Dashboard( User Interface) | USN-11 | To integrate the model with flask | 3 | Low | Monica Jain. D<br>Manjula.S<br>Nishanthi.S<br>Nishi Gilbert. G<br>Nashiha Sulthana. G |

| Sprint-3 | | USN-12 | To create a dashboard as like User Interface | 3 | Medium | Monica Jain. D Manjula.S Nishanthi.S Nishi Gilbert. G Nashiha Sulthana. G |
|---|---|---|---|---|---|---|
| Sprint-3 | | USN-13 | As a user able to fill the application and access the application on the user interface | 2 | Low | Monica Jain. D Manjula.S Nishanthi.S Nishi Gilbert. G Nashiha Sulthana. G |
| Sprint-3 | | USN-14 | Select the type of loan | 2 | Low | Monica Jain. D Manjula.S Nishanthi.S Nishi Gilbert. G Nashiha Sulthana. G |
| Sprint-3 | | USN-15 | To fill the application and check for the availability sources | 3 | Medium | Monica Jain. D Manjula.S Nishanthi.S Nishi Gilbert. G Nashiha Sulthana. G |
| Sprint-4 | Register | USN-16 | Register all the team members to IBM CLoud | 3 | Medium | Monica Jain. D Manjula.S Nishanthi.S Nishi Gilbert. G Nashiha Sulthana. G |
| Sprint-4 | Deployed the website in IBM Cloud | USN-171 | Train the model on IBM Cloud | 5 | High | Monica Jain. D Manjula.S Nishanthi.S Nishi Gilbert. G Nashiha Sulthana. G |
| Sprint-4 | | USN-18 | Deploy the website on IBM Cloud | 4 | Medium | Monica Jain. D Manjula.S Nishanthi.S Nishi Gilbert. G Nashiha Sulthana. G |
| Sprint-4 | | USN-19 | User apply for the loan (user can check the loan eligibility or not) | 4 | Medium | Monica Jain. D Manjula.S Nishanthi.S Nishi Gilbert. G Nashiha Sulthana. G |

**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 | 10 | 9 Days | 21Oct 2022 | 30 Oct 2022 | 20 | 29 Oct 2022 |
| Sprint-2 | 20 | 6 Days | 31 Oct 2022 | 05Nov 2022 | 20 | 05 Nov 2022 |
| Sprint-3 | 11 | 6 Days | 06 Nov 2022 | 12 Nov 2022 | 20 | 12 Nov 2022 |
| Sprint-4 | 19 | 6 Days | 12 Nov 2022 | 19 Nov 2022 | 19 | 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)

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

**Our Project velocity**

Sprint-1 = 20/9 =1.666

Sprint-2 = 20/6=3.33

Sprint-3 = 20/6 = 1.833

Sprint-4 = 19/6 = 3.166

Total Velocity = 60/23 = 2.5

**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