**Project Planning Phase**

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

|  |  |
| --- | --- |
| Date | 18 October 2022 |
| Team ID | PNT2022TMID10909 |
| Project Name | A novel method for handwritten digit recognition 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 | Data collection | USN-1 | We need to collect the data with different handwriting to train the model. | 6 | High | Preetha.S  Thasneem Banu E |
| Sprint-1 | Importing the libraries | USN-2 | We have to implement necessary libraries in python package. | 4 | Low | Sindhiya.R  Madhumitha S M |
| Sprint-1 | Data pre processing | USN-3 | We will load the dataset, handle the missing values, scale and split the data. | 10 | Medium | Thasneem Banu E  Sindhiya.R |
| Sprint-2 | Model building | USN-4 | We will get an application with ML model which provide high accuracy of recognized handwritten digit. | 5 | High | Preetha.S  Sindhiya.R  Thasneem Banu E  Madhumitha S M |
| Sprint-2 | Add the CNN layers | USN-5 | We add input convolutional layer, max pooling layer, flatten, hidden and output layer to the model | 5 | High | Preetha.S  Madhumitha S M |
| Sprint-2 | Compile the model | USN-6 | We compile the model for trained dataset. | 2 | Medium | Sindhiya.R  Thasneem Banu E |
| Sprint-2 | Train and test the model | USN-7 | We train and test the model for the dataset collected and data are validated. | 4 | High | Thasneem Banu E  Madhumitha S M |
| Sprint-2 | Save the model | USN-8 | The compiled data are saved and integrated with an android application or web application. | 2 | Low | Preetha.S  Sindhiya.R |
| Sprint-3 | HTML-Home page | USN-9 | We upload the input image that contains handwritten digits. | 10 | Medium | Preetha.S  Sindhiya.R  Thasneem Banu E  Madhumitha S M |
| Sprint-3 | Building UI application | USN-10 | We provide the fundamental details about the usage of application to customer. | 5 | Low | Preetha.S  Sindhiya.R  Thasneem Banu E  Madhumitha S M |
| Sprint-3 | Run the application | USN-11 | We can see the predicted or recognized digits in the application. | 5 | Medium | Preetha.S  Sindhiya.R  Thasneem Banu E  Madhumitha S M |
| Sprint - 4 | Train the model on IBM | USN-12 | We train the model in IBM cloud and integrate the results. | 10 | High | Preetha.S  Sindhiya.R  Thasneem Banu E  Madhumitha S M |
| Sprint - 4 | Cloud Deployment | USN-13 | We can access the web application | 10 | High | Preetha.S  Sindhiya.R  Thasneem Banu E  Madhumitha S M |

**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 | 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)



Average Velocity=Story points per day

Sprint Duration=Number of days per sprint (Duration)

Velocity=points per sprint

**AV=20/4=6(approx.)**

***The average velocity is 4 points per sprint.***

**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.

