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

| Date | 23 October 2022 |
|---------------|----------------------------------------------------------------|
| Team ID | PNT2022TMID08012 |
| Project Name | Exploratory Analysis of Rainfall Data in India for Agriculture |
| Maximum Marks | 8 Marks |

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

| Sprint | Functional | User Story | User Story / Task | Story | Priority | Team | |
|----------|----------------------------|------------|-------------------------------------------------------------------------------------------------|--------|----------|--------------------------------------------|--|
| | Requirement (Epic) | Number | | Points | | Members | |
| Sprint-1 | Rainfall Prediction Model | USN-1 | Collecting weather dataset, data pre- processing the data and do a data visualization | 5 | High | Team Lead, Team Member 2 | |
| Sprint-1 | | USN-3 | Test the best model and save best model by pickle library | 5 | High | Team lead | |
| Sprint-1 | Crop Recommendation Model | USN-4 | Collecting sowing crop dataset, data pre- processing the data and do a data visualization | 5 | High | Team Member1, Team Member2 | |
| Sprint-1 | | USN-5 | Train crop recommendation model using different machine learning algorithms | 5 | Medium | Team Member2, Team Member3 | |
| Sprint-1 | | USN-6 | Test the best model and save best model by pickle library | 5 | High | Team lead Team Member1, Team Member2 | |

| Sprint-2 | Registration | USN-7 | User can register for the application by entering his or her email, password, and confirming the password. | 5 | Medium | Team Member1, Team Member2 |
|----------|---------------------|--------|------------------------------------------------------------------------------------------------------------|----|--------|-------------------------------|
| Sprint-2 | | USN-8 | User will receive confirmation email or message once registered for the application | 5 | Low | Team Member2, Team Member3 |
| Sprint-2 | Login | USN-9 | Enter the username and password to login to the application | 5 | Medium | Team lead |
| Sprint-2 | | USN-10 | The existing credentials should be used for login on multiple systems | 5 | Medium | Team lead Team Member3 |
| Sprint-2 | Dashboard | USN-11 | Forecast the today weather | 10 | Low | Team Lead, Team Member 2 |
| Sprint-3 | Rainfall Prediction | USN-12 | User can enter the weather parameters like min temp, max temp, etc. | 5 | High | Team Member2, Team Member3 |
| Sprint-3 | | USN-13 | Predict the rainfall and display the result | 5 | High | Team Member2, |
| Sprint-3 | | USN-15 | Predict the crop to be harvested and display the result | 5 | High | Team lead Team Member1 |
| Sprint-4 | Testing | USN-16 | Test the application | 10 | High | Team lead Team Member3 |
| Sprint-4 | Deploy Model | USN-17 | deploy the model in IBM cloud to make user friendly application | 10 | High | Team Member1, Team Member2 |

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

| Sprint | Total Story | Duration | Sprint Start Date | Sprint End Date | Story Points | Sprint Release Date |
|----------|-------------|----------|-------------------|-----------------|-------------------|---------------------|
| | Points | | | (Planned) | Completed (as on | (Actual) |
| | | | | | Planned End Date) | |
| Sprint-1 | 30 | 6 Days | 24 Oct 2022 | 29 Oct 2022 | 30 | 30 Oct 2022 |
| Sprint-2 | 30 | 6 Days | 31 Oct 2022 | 05 Nov 2022 | 30 | 06 Nov 2022 |
| Sprint-3 | 20 | 6 Days | 07 Nov 2022 | 12 Nov 2022 | 20 | 13 Nov 2022 |
| Sprint-4 | 20 | 6 Days | 14 Nov 2022 | 19 Nov 2022 | 20 | 20 Nov 2022 |

Velocity:

We have a 6-day sprint duration, and the velocity of the team is 20 to 30 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{sprint\ duration}{velocity}$$

| Sprint | Average Velocity |
|----------|------------------|
| Sprint-1 | 5 |
| Sprint-2 | 5 |
| Sprint-3 | 3.33 |
| Sprint-4 | 3.33 |

Total Average Velocity = 4.16

| | 2 | OCT 23 24 25 26 27 28 29 30 | NOV 31 1 2 3 4 5 6 | 7 8 9 10 11 12 13 | NOV 14 15 16 17 18 19 20 |
|-----------------------------------------|-------|-----------------------------|--------------------|-------------------|-----------------------------|
| Sprints | | Sprint 1 | Sprint 2 | Sprint 3 | Sprint 4 |
| ✓ ▶ IP-20 Rainfall Prediction Model | | | | | |
| □ IP-21 Data Collection | то ро | | | | |
| ■ IP-22 Data Preprocessing | TO DO | | | | |
| ■ IP-23 Data Visualization | TO DO | | | | |
| ■ IP-24 Train Rainfall Prediction Model | TO DO | | | | |
| ■ IP-25 Test the Model | TO DO | | | | |
| ■ IP-26 Save the Model | TO DO | | | | |
| ✓ ☑ IP-27 Crop Recommendation Model | | | | | |
| ■ IP-28 Data Collection | TO DO | | | | |
| ■ IP-29 Data Preprocessing | TO DO | | | | |
| ■ IP-30 Data Visualization | TO DO | | | | |
| IP-31 Train Crop Recommendation Model | TO DO | | | | |
| ■ IP-32 Test the Model | TO DO | | | | |
| ■ IP-33 Save a Model | TO DO | | | | |
| ✓ ☑ IP-34 Registration | | | | | |
| ■ IP-35 Registration Page | то ро | | | | |
| ■ IP-36 User Authentication | TO DO | | | | |
| ✓ ☑ IP-37 Login | | | | | |
| ■ IP-43 Login Page | то ро | | | | |
| ■ IP-44 User Authentication | TO DO | | 4 | | |
| ✓ ▼ IP-38 Dashboard | | | | | |
| ■ IP-45 Dashboard Page | то ро | | | | |
| ✓ ☑ IP-39 Rainfall Prediction | | | | | |
| □ IP-46 Rainfall Prediction Page | то ро | | | | |
| □ IP-47 Predicted Result Page | то ро | | | | |
| ▼ IP-40 Crop Recommendation | | | | | |
| | то ро | | | | |
| ■ IP-49 Predicted Result Page | то ро | | | | |
| ✓ IP-41 Testing | | | | | |
| | | | | | |
| | TO DO | | | | |
| ✓ ✓ IP-42 Deploy Model | | | | | |
| ■ IP-51 Deploy Model in IBM Cloud | TO DO | | | | |

