**Project Planning Phase**

| Field | Details |
| --- | --- |
| Date | 16-06-2025 |
| Team ID | LTVIP2025TMID48265 |
| Project Name | Smart Sorting: Detecting Rotten Fruits with Transfer Learning |
| Maximum Marks | 5 Marks |

**Overview: Key Concepts**

| **Term** | **Description** |
| --- | --- |
| Sprint | A fixed 5-day development cycle to deliver a set of ML/frontend features. |
| Epic | A large task like model training or frontend development. |
| User Story | A focused feature like “Upload fruit image for prediction.” |
| Story Points | A Fibonacci-based unit estimating task complexity (not time). |

**Sprint Planning Table – 5 Days Per Sprint**

**Sprint 1 – Dataset Preparation & Model Training**

| Day | Task | Story Points | Type | Notes |
| --- | --- | --- | --- | --- |
| 1 | Collect fresh and rotten fruit image datasets | 3 | Data Sourcing | From Kaggle or open datasets |
| 2 | Preprocess images (resize, normalize) | 2 | Data Cleaning | Prepare data for model input |
| 3 | Apply transfer learning (VGG16 or similar) | 4 | Model Training | Fine-tune for binary classification |
| 4 | Evaluate model performance and save .h5 file | 2 | Model Evaluation | Accuracy, confusion matrix, save model |
| 5 | Sprint review + documentation | - | QA | Review performance and write brief summary |
|  | Total Story Points (Sprint 1) | 11 |  |  |

**Sprint 2 – Frontend UI Development (Static Web)**

| Day | Task | Story Points | Type | Notes |
| --- | --- | --- | --- | --- |
| 1 | Design homepage with project overview | 2 | UI Design | HTML/CSS layout with branding |
| 2 | Build image upload section (static UI only) | 2 | UI Development | Simulate upload for demo purposes |
| 3 | Create prediction result display layout | 3 | UI/UX | Static text/image blocks to show classification |
| 4 | Link all pages for smooth navigation | 2 | Frontend Integration | Use simple routing/navigation with HTML buttons |
| 5 | Sprint review + user feedback | - | QA | Review UI/UX quality and consistency |
|  | Total Story Points (Sprint 2) | 9 |  |  |

**Velocity Calculation**

| **Metric** | **Value** |
| --- | --- |
| Story Points in Sprint 1 | 11 |
| Story Points in Sprint 2 | 9 |
| Total Story Points | 20 |
| Number of Sprints | 2 |
| Velocity | 10 Points/Sprint |

**Sprint Status Summary**

| Sprint | Duration (Days) | Points Planned | Points Completed | Completion % | Remarks |
| --- | --- | --- | --- | --- | --- |
| Sprint 1 | 5 | 11 | 11 | 100% | Model trained and saved successfully |
| Sprint 2 | 5 | 9 | 9 | 100% | Static frontend UI built and tested |

**Summary**

| Metric | Value |
| --- | --- |
| Total Story Points Completed | 20 |
| Average Velocity | 10 Story Points/Sprint |
| Planning Strategy | UI and ML-focused, backend excluded |
| Tools Used | TensorFlow/Keras, HTML, CSS, JS |