# First Release Plan

The first release will focus on delivering core functionality that is central to the Virtual Pet Manager (VPM) application. This will allow users to create, customise, and manage virtual pets, with the ability to perform essential care actions.

## Goals for the First Release

The first release will focus on the following features

1. Pet Creation: Allows users to create and customise pets
2. Basic Pet Interaction: Provide basic care functions (feed, clean, etc)
3. User account and authentication: Enable user registration, login, and progress saving
4. Basic UI: Implement a clean, basic prototype UI for managing pets and user accounts

These four steps were made as per the design brief provided with the minimum requirements. If these goals are met, the project will meet the minimum requirements.

## First Release Features

The Appendix A shows a full list of user stories for the project. Release 1 will focus on the following user stories:

Pet Creation and Customization:

* Story ID 1: Create a new pet
* Story ID 2: Customize a pet
* Story ID 3: Customize pet’s shelter/habitat
* Story ID 5: Add a new pet to the collection

Pet Care and Interaction:

* Story ID 8: Pet a pet
* Story ID 9: Feed a pet
* Story ID 10: Clean a pet
* Story ID 11: Tell a pet’s mood (see emotions)

User Account:

* Story ID 16: Account Registration/Login/Logout
* Story ID 17: Account Authentication (By Password)
* Story ID 18: Saving user’s progress

# First Sprint Plan

The first sprint will focus on delivering the minimum viable product (MVP) that enables users to create pets and perform basic interactions with them. Additionally, user account functionalities will be set up so that users may register, log in, and save progress.

**Sprint duration:** 2 Weeks

## Sprint Goals

In accordance with the first release plan, the functional goals of the first sprint are shown below:

1. Setup the foundation for pet creation and interaction
2. Implement user registration and authentication
3. Ensure user permanence functionality works.
4. Construct prototype UI for each window necessary

## Sprint Backlog

The following user stories will be included in the first sprint. These are selected based on dependencies and the critical path for user interactions.

1. **Pet Creation and Customization:**

* **Story ID 1**: Create a new pet
  + **Objective**: Provide users with the ability to create their first pet.
  + **Acceptance Criteria**: "Create Pet" button available, pet added to collection after selection.
* **Story ID 2**: Customize a pet
  + **Objective**: Allow users to personalize their pet’s appearance.
  + **Acceptance Criteria**: Customization options for name, color, and type reflected in the profile.

1. **Pet Care and Interaction:**

* **Story ID 9**: Feed a pet
  + **Objective**: Users can feed their pet and improve its health and mood.
  + **Acceptance Criteria**: "Feed" button is available, and mood/health increases after feeding.
* **Story ID 11**: Tell a pet’s mood (see emotions)
  + **Objective**: Users can see the pet’s mood to monitor well-being.
  + **Acceptance Criteria**: Mood gauge is visible and updates after interactions.

1. **User Account:**

* **Story ID 16**: Account Registration/Login/Logout
  + **Objective**: Enable users to create an account and log in.
  + **Acceptance Criteria**: Registration and login forms are functional, users can access their pets.
* **Story ID 18**: Saving user’s progress
  + **Objective**: Ensure that user progress is saved automatically.
  + **Acceptance Criteria**: Data saved after feeding, customizing pets, and logging in.

The accompanying GUI interface will also need to be constructed to implement these features and satisfy these user stories.

## Sprint Tasks

A list of tasks has been created that highlight the optimal method of achieving the goals for the first sprint. These go through each of the user stories that have been set for this period of the project.

1. **Set up Project Structure**:

* Initialize project repository and set up folders for pet models, UI, and account handling.

1. **Pet Creation UI**:

* Implement the UI screen for creating new pets (Story ID 1).
* Add text fields for pet name and a dropdown for selecting pet type.
* Create a "Create Pet" button to confirm the creation of the pet.
* Display feedback to the user (e.g., “Pet created successfully”).

1. **Pet Customization Options**:

* Add options for users to customize pet details such as pet name and color (Story ID 2).
* Implement a live preview of the customized pet that updates as the user modifies attributes.
* Add a "Save" button to confirm the customizations.

1. **Feed Interaction**:

* Implement the feed action button and logic for mood/health updates (Story ID 9).
* Add a "Feed Pet" button to the pet profile screen.
* Display a progress bar or animation to show the feeding process.
* Update the pet’s mood/health and show feedback when feeding is complete.

1. **Mood Gauge**:

* Create and link a visible mood gauge to the pet’s profile (Story ID 11).
* Ensure the mood gauge updates dynamically based on user interactions like feeding and playing.
* Display mood states (e.g., Happy, Sad) based on the pet’s current well-being.

1. **Account Registration Form**:

* Design and implement the registration form (Story ID 16).
* Add fields for username, email, and password input.
* Include a "Register" button and display error/success messages based on input validation.

1. **Login/Logout Handling**:

* Develop functionality for logging in and out (Story ID 16).
* Create a login form with input fields for username and password.
* Implement a "Logout" button and ensure session handling works correctly.

1. **Auto-Save Progress**:

* Implement logic for automatically saving progress after interactions like feeding or customizing pets (Story ID 18).
* Display a small notification (e.g., “Progress saved”) once the data is successfully saved in the background.

## Review

Following this 2-week sprint, the team should be able to demonstrate the pet creation and customisation workflows, basic pet interaction including feeding and viewing the pets mood, as well as account registration, login, and user permanence. All of this should be visualised through an appealing prototype GUI that is aimed towards user friendliness.

Following this sprint, the team will expand on the pet care actions by implementing cleaning and other interactions. The multiple pets and pet management features will also be implemented. Finally, the UI will be improved on based on testing and user feedback such that the graphics element can be tuned.

# Appendix

## Appendix A | Core Functionality

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Pet Creation and Customisation** | | | | |
| **Story ID** | **Story Title** | **Description** | **Acceptance Criteria** | **Story Points** |
| **1** | Create a new pet | As a user, I want to create a new pet, so that I can start caring for it. | 1. "Create Pet" button is available on the main screen. 2. The user can select a pet type. 3. The pet is added to the pet collection. | 2 |
| **2** | Customize a pet | As a user, I want to customize my pet, so that I can personalize its appearance and attributes. | 1. A customization screen allows users to change pet attributes (e.g., color, name). 2. Customizations are reflected in the pet’s profile. | 2 |
| **3** | Customize pet’s shelter/habitat | As a user, I want to customize my pet's habitat, so that I can improve its living space. | 1. Options to change the pet’s shelter, toys, and environment are available. 2. Customizations are saved and visible in the pet’s profile. | 3 |
| **4** | View all pets in user’s list | As a user, I want to view all of my pets, so that I can see the pets I’m managing. | 1. A consolidated view of all pets is available. 2. Each pet's details (name, type, mood) are displayed. | 1 |
| **5** | Add a new pet to the collection | As a user, I want to add more pets, so that I can increase the size of my virtual pet family. | 1. "Add Pet" button is available in the pet management screen. 2. New pets are added to the collection without deleting existing pets. | 2 |
| **6** | Rename a pet | As a user, I want to rename my pet, so that I can personalize it further. | 1. A "Rename" button is available for each pet. 2. A dialog allows users to input a new name. 3. Pet’s name is updated across all screens. | 1 |
| **7** | Random Pet Creation | As a user, I want to create a pet with random attributes, so that I can quickly generate a pet. | 1. A "Randomize Pet" button is available. 2. Random attributes like name, type, and color are generated. 3. The user can modify selections. | 2 |
| **Pet Care and Interaction** | | | | |
| **Story ID** | **Story Title** | **Description** | **Acceptance Criteria** | **Story Points** |
| **8** | Pet a pet | As a user, I want to pet my virtual pet, so that I can increase its mood and bond with it. | 1. A "Pet" button is available for each virtual pet. 2. Clicking the button triggers an animation of petting. 3. Pet mood improves after interaction. | 2 |
| **9** | Feed a pet | As a user, I want to feed my pet, so that I can maintain its health and happiness. | 1. "Feed" button is available in the pet’s profile. 2. Different food options are available for selection. 3. Pet mood and health improve after feeding. | 2 |
| **10** | Clean a pet | As a user, I want to clean my pet, so that it stays healthy and happy. | 1. A "Clean" button is available for each pet. 2. Cleaning animation occurs. 3. Pet’s cleanliness attribute improves after cleaning. | 2 |
| **11** | Tell a pet’s mood (see emotions) | As a user, I want to see my pet’s current mood status, so that I can monitor its well-being. | 1. Mood gauge is visible on the pet's profile. 2. The gauge updates based on interactions. 3. Poor care decreases mood over time. | 2 |
| **12** | Search for pet care history | As a user, I want to search for my pet’s care history, so that I can track how I’ve been taking care of it. | 1. A "Search History" button is available for each pet. 2. History includes feeding, cleaning, and playing activities. 3. History is searchable by date. | 3 |
| **13** | Retire a pet | As a user, I want to retire older pets, so that I can manage space for new pets without deleting their care history. | 1. A “Retire Pet” option is available. 2. The retired pet is moved to an archive. 3. The pet’s care history is maintained in the archive. | 3 |
| **14** | Receive notifications about pets' needs | As a user, I want to receive notifications about my pet’s needs, so that I can take timely care actions. | 1. Notifications for care actions are triggered. 2. User can dismiss or snooze them. 3. Notifications are based on the pet’s actual needs. | 3 |
| **15** | Receive achievements for good care of pets | As a user, I want to receive achievements for taking good care of my pets, so that I can stay motivated to care for them. | 1. Achievements are unlocked after consistent care (e.g., 7 days of feeding). 2. Badges are visible in the user profile. 3. Notifications appear when achievements are earned. | 3 |
| **UX/UI** | | | | |
| **Story ID** | **Story Title** | **Description** | **Acceptance Criteria** | **Story Points** |
| **16** | Account Registration/Login/Logout | As a user, I want to register, log in, and log out of my account, so that I can access my pets securely. | 1. Registration form captures username, email, and password. 2. Users can log in using their credentials. 3. "Logout" button securely logs out the user. | 3 |
| **17** | Account Authentication (By Password) | As a user, I want secure password-based authentication, so that I can protect my account from unauthorized access. | 1. Passwords are encrypted and stored securely. 2. Incorrect password attempts prompt a lockout after 5 tries. 3. Users receive emails for successful or failed login attempts. | 3 |
| **18** | Saving user’s progress | As a user, I want my progress to be saved automatically, so that I don’t lose any data when interacting with my pets. | 1. Progress auto-saves after major interactions (e.g., feeding, cleaning). 2. Save success notification is displayed. 3. Saved progress is retrievable after login. | 2 |
| **User Account** | | | | |
| **Story ID** | **Story Title** | **Description** | **Acceptance Criteria** | **Story Points** |
| **19** | Account Registration/Login/Logout | As a user, I want to register, log in, and log out of my account, so that I can access my pets securely. | 1. Registration form captures username, email, and password. 2. Users can log in using their credentials. 3. "Logout" button securely logs out the user. | 3 |
| **20** | Account Authentication (By Password) | As a user, I want secure password-based authentication, so that I can protect my account from unauthorized access. | 1. Passwords are encrypted and stored securely. 2. Incorrect password attempts prompt a lockout after 5 tries. 3. Users receive emails for successful or failed login attempts. | 3 |
| **21** | Saving user’s progress | As a user, I want my progress to be saved automatically, so that I don’t lose any data when interacting with my pets. | 1. Progress auto-saves after major interactions (e.g., feeding, cleaning). 2. Save success notification is displayed. 3. Saved progress is retrievable after login. | 2 |
| **User Account** | | | | |
| **Story ID** | **Story Title** | **Description** | **Acceptance Criteria** | **Story Points** |
| **22** | Manage multiple pets | As a user, I want to manage multiple pets at once, so that I can care for all of them efficiently. | 1. User can select multiple pets for feeding or washing. 2. The selected action applies to all selected pets. 3. Care history is updated for all pets. | 3 |
| **23** | Add new pet easily | As a user, I want to easily add new pets to my collection, so that I can expand my virtual pet family. | 1. "Add Pet" button is visible. 2. Default options are available to streamline the process. 3. Pet is added with minimal input required. | 2 |
| **24** | Pet removal confirmation | As a user, I want to receive confirmation before deleting a pet, so that I don’t accidentally remove it. | 1. Confirmation dialog appears before deletion. 2. Pet details are shown to confirm identity. 3. Pet is only removed after final confirmation. | 1 |
| **25** | Care history log | As a user, I want to see a log of my pet's care history, so that I can track how well I’ve been taking care of it. | 1. Log includes care actions like feeding, playing, etc. 2. History is sortable by date. 3. Care history is visible on each pet’s profile. | 2 |
| **26** | View all pets at once | As a user, I want to view all my pets on one screen, so that I can monitor them easily. | 1. "View All Pets" button is visible in the pet management screen. 2. Pets are shown with names and mood status. 3. Clicking on a pet opens its profile. | 2 |
| **27** | Retire a pet | As a user, I want to retire older pets, so that I can manage space for new pets without deleting their care history. | 1. A “Retire Pet” option is available. 2. The retired pet is moved to an archive. 3. The pet’s care history is maintained in the archive. | 3 |

## Appendix B | Optional Functionality

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| --- | --- | --- | --- | --- |
| **Advanced Customisation and Graphics** | | | | |
| **Story ID** | **Story Title** | **Description** | **Acceptance Criteria** | **Story Points** |
| **31** | Advanced pet customization | As a user, I want additional options for customizing my pet, such as selecting specific breeds, patterns, and accessories. | 1. The customization screen includes breed, color, and accessory options. 2. Customizations are reflected on the pet profile. 3. Changes can be saved. | 3 |
| **32** | Toy customization | As a user, I want to customize toys for my pet, so that I can personalize its playtime experience. | 1. Toy customization options are available in the pet care section. 2. The user can select colors or types of toys. 3. The pet interacts with the toy. | 2 |
| **33** | Enhanced graphical animations | As a user, I want more detailed animations for pet interactions (e.g., feeding, playing, cleaning), so that the experience is visually richer. | 1. Animations for pet actions (feeding, playing, etc.) are smooth and detailed. 2. Animations are based on the pet's customization. 3. Animations trigger during interactions. | 5 |
| **34** | Customizable habitats and backgrounds | As a user, I want to customize my pet's living space or environment with more background options. | 1. Users can select different backgrounds for the pet’s habitat. 2. The habitat background can be updated based on themes (e.g., forest, beach). 3. Backgrounds are saved and applied. | 3 |
| **Breeding System** | | | | |
| **Story ID** | **Story Title** | **Description** | **Acceptance Criteria** | **Story Points** |
| **35** | Pet breeding system | As a user, I want to breed my virtual pets to create new pets with a mix of attributes from both parents. | 1. Breeding button is available for compatible pets. 2. The offspring inherits a combination of parent traits (e.g., color, size). 3. The new pet is added to the collection. | 8 |
| **36** | Breeding history log | As a user, I want to see the history of pets I have bred, so that I can track lineage. | 1. A breeding history log is available for each pet. 2. The log shows parent information and date of breeding. 3. The log is accessible from the pet’s profile. | 3 |
| **Social and Community Features** | | | | |
| **Story ID** | **Story Title** | **Description** | **Acceptance Criteria** | **Story Points** |
| **37** | Share pets with friends | As a user, I want to share my pet with other users, so that I can show my progress and interact with friends. | 1. A "Share" button is available on the pet profile. 2. Pets can be shared with friends via social media or in-app community. 3. Shared pets cannot be edited by others. | 5 |
| **38** | Pet care leaderboard | As a user, I want to see a leaderboard that ranks users based on how well they care for their pets. | 1. A global leaderboard is displayed. 2. Users are ranked based on metrics such as mood, health, and activity levels. 3. Users can see their own ranking compared to others. | 3 |
| **39** | Community challenges | As a user, I want to participate in community challenges, so that I can compete with others and earn rewards. | 1. Weekly or monthly challenges (e.g., most pets fed, longest mood stability) are available. 2. Rewards are given for completing challenges. 3. Leaderboard shows progress. | 5 |
| **Mini-games and Interactive Play** | | | | |
| **Story ID** | **Story Title** | **Description** | **Acceptance Criteria** | **Story Points** |
| **40** | Play mini-games with pets | As a user, I want to play mini-games with my pet, so that I can increase its mood and happiness. | 1. A "Play Game" button is available on the pet profile. 2. Simple mini-games (e.g., fetch, catch) are available. 3. The pet’s mood improves after playing. | 5 |
| **41** | Customize pet toys for mini-games | As a user, I want to customize the toys used in mini-games, so that I can personalize the play experience for my pet. | 1. Toys can be customized before mini-games (e.g., color, style). 2. The selected toy is used during the mini-game. 3. Customizations are reflected in gameplay. | 3 |
| **42** | Mini-game achievements | As a user, I want to earn achievements for playing mini-games with my pet, so that I stay motivated to keep playing. | 1. Achievements are unlocked after specific mini-game milestones (e.g., 100 games played). 2. Achievements are displayed on the user profile. 3. Notifications appear when achievements are unlocked. | 3 |
| **System Notifications and Reminders** | | | | |
| **Story ID** | **Story Title** | **Description** | **Acceptance Criteria** | **Story Points** |
| **43** | In-app pet care reminders | As a user, I want to receive reminders about when my pet needs care, so that I can ensure its well-being. | 1. In-app notifications appear when the pet needs feeding, playing, or cleaning. 2. Notifications are based on time since the last action. 3. Notifications can be dismissed or snoozed. | 2 |
| **44** | Custom care reminder settings | As a user, I want to customize the frequency and type of reminders I receive for pet care. | 1. Users can set custom reminder intervals for feeding, cleaning, or playing. 2. Reminder settings are available in the settings menu. 3. Reminders adjust based on user input. | 3 |
| **45** | System-level pet care notifications | As a user, I want to receive system notifications (push notifications) even when the app is closed, so that I can stay updated on my pet's needs. | 1. Notifications appear as push notifications on mobile or desktop. 2. Notifications are triggered when the pet's mood or health drops. 3. Users can disable notifications. | 5 |