Sri Lanka Institute of Information Technology

IT2080 - Information Technology Project

Year 2 Semester 2 - 2025

Activity 03

Agile based Activity

Planning project scope and schedule

ITP25_B7.2_168

Project Title: Veterinary Management System (PetIQ.lk)

Group Details

	IT Number	Student Name	Student E-mail Address	Contact Number
1	IT23640948	Gamlath K. G. V. K. D	it23640948@my.sliit.lk	0702943487
2	IT23631106	Kavindu J. M. R	it23631106@my.sliit.lk	0703274142
3	IT23594722	Wanasinghe W. M. D. T	it23594722@my.sliit.lk	0774376338
4	IT23413474	Rathnayake W. P. D. D. W	it23413474@my.sliit.lk	0702979383
5	IT23631274	Abeysinghe A. M. B. N	it23631274@my.sliit.lk	0761260885

Objective: Plan, prioritize, and manage the development process by employing agile methodologies.

1. Prepare a Product backlog for your project

2. Assign priority for each user story/ or requirement

3. Add relative estimates for the user stories using agile estimation method.

4. Based on the priority and estimates given, separate them into 3 sprints (duration of each sprint is two weeks). Each sprint should have a product as an outcome. The final sprint (3rd) should have the fully developed product.

5. Create the Kanban board (task board) for ITP project using a suitable project management tool (Ex: Trello. Jira or any other). Ensure following steps in creating the Kanban board.

Add all user stories in product backlog to the Kanban board. Add all tasks identified in each user story.

You may attach a screenshot for the submission

6. Provide a sprint plan showing the tasks allocated for each member.

Question 1:

IT23640948 - Gamlath K. G. V. K. D

1.1 Function 1- Appointment Management

ID	Feature	User Story	Priority	Acceptance Criteria
F01	Pet Owner Profiles	As a pet owner, I want to register and update my profile so I can manage my pets and appointments securely.	Show-stopper (1)	– Users can register with personal & contact details. – Profiles can be updated anytime. – Pet details (name, breed, age, medical history) stored securely.
F02	Appointment Request Form	As a pet owner, I want to fill in an appointment request form with my pet's details and health issue, so the system can suggest available veterinarians.	Show-stopper (1)	– Form includes fields like pet type, symptoms, preferred date/time. – System suggests available vets. – Owner can view vet details before booking.
F03	Custom Appointment Request	As a pet owner, I want to customize my appointment request if I'm not satisfied with the suggested options.	Show-stopper (1)	– Owners can change preferred vet, date, and time. – System saves request. – Admin/vet reviews and confirms.

F04	Appointment History & Tracking	As a pet owner, I want to view and track my appointment history so I can keep medical records and check upcoming visits.	Show-stopper (1)	– System shows previous & upcoming appointments. – Real-time status updates (confirmed, pending, completed). – Payment/consultation summaries displayed.
F05	Notifications	As a pet owner, I want to receive appointment updates, so I know about confirmations, cancellations, or changes.	Critical (2)	– Pet owner notified of status updates. – Alerts sent via email/app notification.
F06	Chatbot Support (Optional)	As a pet owner, I want a chatbot assistant so I can quickly ask about appointment availability or product queries.	Major (3)	– Chatbot answers FAQs (appointment slots, clinic hours, product stock). – Escalates to staff when needed.

IT23631106 - Kavindu J. M. R

1.2 Function 2- User Management

ID	Feature	User Story	Priority	Acceptance Criteria
F01	User Registration & Profiles	As a user (pet owner, vet, or admin), I want to register and create a profile so I can access the system securely.	Show-stopper (1)	– Users can register with name, email/phone, role selection (owner, vet, admin, receptionist). – Profiles include personal and role-based details. – Data stored securely.
F02	Pet Profiles Management	As a pet owner, I want to add and update my pets' profiles so I can manage appointments and medical history.	Show-stopper (1)	– Pet profile fields: name, species, breed, age, vaccination status. – Owners can add multiple pets. – Medical records linked to each pet.
F03	Role-Based Access Control	As an admin, I want to assign roles and permissions so users only access features relevant to them.	Show-stopper (1)	– Admin can assign roles (vet, pet owner, receptionist, product manager). – Each role has restricted permissions. – Unauthorized access prevented.
F04	Login & Secure Authentication	As a user, I want to log in securely so I can protect my account.	Show-stopper (1)	– Login with email/phone + password/OTP. – Two-factor authentication optional. – Password reset available.

F05	Profile Updates & Settings	As a user, I want to update my profile and account settings, so my information stays current.	Major (3)	– Users can update contact info, profile picture, password. – Changes reflect immediately. – Audit logs maintained.
F06	Admin User Management	As an admin, I want to view, edit, or deactivate user accounts so I can maintain system integrity.	Show-stopper (1)	– Admin can suspend, activate, or delete accounts. – Admin can reset user passwords. – Activity logs visible.

IT23594722 - Wanasinghe W. M. D. T

1.3 Function 3 – Medical Record Management

ID	Feature	User Story	Priority	Acceptance Criteria
F01	Create & Update Medical Records	As a veterinarian, I want to create and update pet medical records so we can track treatment history.	Show-stopper (1)	– Vets can add diagnoses, treatments, vaccinations, prescriptions. – Records are editable and timestamped.
F02	View Medical History	As a pet owner, I want to view my pet's medical history so I can stay informed about its health.	Show-stopper (1)	– Owners can view summaries (diagnosis, date, vet name). – Secure access to own pet only.
F03	Document Uploads (X-rays, Labs)	As a vet, I want to upload medical reports like X-rays or lab results, so they're attached to the pet's profile.	Major (3)	– System supports uploading images, PDFs. – Files tagged and linked to visit date.
F04	Record Sharing with Specialists	As a vet, I want to share medical records with another specialist for second opinions.	Major (3)	– Controlled sharing via access permissions. – Logs who accessed shared records.
F05	Prescription Management	As a vet, I want to add prescriptions to a pet's profile so owners can access it anytime.	Show-stopper (1)	– Prescription details include medicine, dosage, instructions. – Pet owner receives notification.
F06	Emergency Alerts/Flagging	As a vet, I want to flag critical health conditions so that future treatments are safe and fast.	Medium	– Records can be marked as "critical". – Alert shown on appointment dashboard.

IT23413474 - Rathnayake W. P. D. D. W

1.4 Function 4 - Pet Product Management

ID	Feature	User Story	Priority	Acceptance Criteria
F01	Product Catalog Management	As an Admin, I want to add, update, and delete pet products so I can maintain accurate inventory.	Show-stopper (1)	– Admin can add new products with details (name, type, price, stock, image). – Admin can update product details. – Admin can delete products. – Updated products are visible immediately in catalog.
F02	Browse & Search Products	As a Pet Owner, I want to browse and search products by category or keyword so I can find what I need easily.	Critical (2)	– Search bar available on product page. – Filters by type, price, and availability. – Relevant products are displayed.
F03	Add to Cart	As a Pet Owner, I want to add products to my cart and update quantities so I can prepare for checkout.	Critical (2)	– User can add items to cart. – User can remove items from cart. – User can change item quantities. – Cart persists during session.

F04	Stock Management	As an Admin, I want to track product stock and receive low-stock alerts so I can manage supply.	Major (3)	– Stock count reduces automatically after purchase. – Admin receives low-stock alerts. – System prevents purchase if stock = 0.
F05	Order Placement	As a Pet Owner, I want to place orders for selected products so I can buy them online.	Show-stopper (1)	– User can place order successfully. – System generates order summary. – Order details stored in database. – User receives email/SMS confirmation.
F06	Product Categories	As an Admin, I want to organize products into categories (food, medicine, accessories, grooming) so browsing is easier.	Major (3)	– Products categorized correctly. – Categories appear in product list. – Users can filter by category.

IT23631274 - Abeysinghe A. M. B. N

1.4 Function 4 - Payment Management

ID	Feature	User Story	Priority	Acceptance Criteria
F01	Payment for Services	As a Pet Owner, I want to pay for bookings, treatments, prescriptions, and product orders so that the system can charge securely.	Critical	– Checkout supports saved or new card. – Payment gateway processes payment. – Receipt generated and stored. – Payment unchangeable. – Payment linked to relevant service/order. – Payment viewable in payment history.
F02	Card Vaulting (Add/View/Update/Delete)	As a Pet Owner, I want to manage my cards for faster checkout.	Critical	– Validates card number, expiry date and CVV – Card details list shows last 4 digits of the card, brand and expiry date. – Owner can change the details of a saved card like name on the card, expiry date. – Delete removes the saved card – Owner can only see his cards

F03	Payment History	As a Pet Owner/Admin, I want a history of payments.	Critical	- Filter by date/service. - Admin audit view with non sensitive data. - No edits to payments.
F04	Payment Gateway	As a System, system, system must handle transactions correctly and keep its records perfectly aligned with the gateway records.	Critical	- Secure gateway integration. - Status + transaction IDs stored. - Retry policy. - Detailed logs.
F05	Secure staff assisted payments	As a Receptionist, I want to use an owner's saved card with consent to collect in-clinic payments.	Critical	- Verifying what a user is allowed to do based on their assigned role. - Explicit consent via OTP/signature. - Receptionist cannot view CVV. - Admins cannot view card data.
F06	Refund	As an Admin, I want to issue refunds when appropriate.	Major	- Refund implemented as new transaction. - Original payment remains unchangeable. - Full audit trail.

Question 2

Priority Scale Descriptions (Veterinary Management System)

❖ **Show-stopper (1)**

Definition: Critical to the core functionality of the system. Without this, the platform cannot operate as expected.

Urgency: Immediate development required**.**

Examples:
- User registration and login (pet owners, vets, admins).
- Pet owner appointment booking initiation.
- Admin verification of user/vet accounts.
- Veterinarian confirmation or rejection of appointment requests.
- Checkout and payment for pet product purchases.

❖ **Critical (2)**

Definition: High priority for smooth user experience and system stability. If delayed, it may significantly impact users.

Urgency: High, must be completed soon.

Examples:
- Appointment status tracking for pet owners (confirmed, pending, completed).
- Notifications about appointment updates (confirmation, cancellation, reschedule).
- Product order tracking and delivery status.
- Admin monitoring of scheduled appointments and product inventory.

❖ **Major (3)**

Definition: Enhances business operations and efficiency. Delays won't break the system but may cause inconvenience.

Urgency: Moderate, should be implemented in a reasonable timeframe.

Examples:
- Pet profile updates (age, breed, vaccination history).
- Admin reports on appointments, revenue, and product sales.
- Stock management for pet products.
- Messaging/chat between owners and vets for consultation.

❖ **Normal (4)**

Definition: Improves usability and engagement. Adds convenience but isn't urgent.

Urgency: Low, can be implemented after higher-priority tasks.

Examples:
- Personalized reminders for vaccinations, deworming, or follow-up checkups.
- Display of trending pet products or recommended packages.
- Loyalty points or discounts for frequent purchases/visits.

❖ **Minor (5)**

Definition: Non-essential tasks that mostly enhance aesthetics or secondary functions.

Urgency: Lowest, can be implemented later.

Examples:
- UI/UX theme improvements (dark mode, color themes).
- Extra notification customization (sound, vibration settings).
- Gamification features (badges, pet health score visualizations).

Question 3

3.1 Agile Categorization of User Stories

Agile Key Principles Applied:

- Effort Category: Small, Medium, Large, Extra Large (based on estimated hours)
- Story Points: A Fibonacci scale (1, 2, 3, 5, 8, 13, 21, 34, 55…)
- Priority: Show-Stopper, Critical, Major, Normal, Minor
- Sprint Planning Ready: Each user story can be split across Sprints

3.2 Categorized User Stories (Agile-Friendly)

- **3.2.1. Small (1 - 15 Estimated Hours)**

Effort Level: Easy to deliver within a Sprint. Ideal for early Sprint items or quick wins. Story Points: 1, 2, 3

Order ID	User Story	Estimated Hours	Story Points	Priority	Assignee
001	Register With email and Phone number	10 hrs	3 pts	Show Stopper	Rashmika
002	Log in securely with password	8 hrs	3 pts	Show Stopper	Rashmika
003	Reset password via email verification	8 hrs	8 hrs	Show Stopper	Rashmika
004	Update profile information	6 hrs	2 pts	Show Stopper	Rashmika
005	Manage and verify user accounts	10 hrs	3 pts	Show Stopper	Rashmika

3.2.2 Medium (16 - 30 Estimated Hours)

Effort Level: Fits comfortably in a Sprint (or split into subtasks). Medium complexity.
Story Points: 5, 8

Order ID	User Story	Estimated Hours	Story Points	Priority	Assignee
006	Register or update pet owner details	12 hrs	5 pts	Show Stopper	Kavindu
007	Schedule an appointment for a pet	10 hrs	5 pts	Major	Gamlath
008	Track appointment status	12 hrs	8 pts	Major	Gamlath
009	Approve or reject appointment requests	10 hrs	5 pts	Critical	Gamlath
010	Monitor all upcoming appointments	10 hrs	5 pts	Critical	Rashmika
011	View assigned veterinary tasks	8 hrs	3 pts	Critical	Wanasinghe
012	Update medical record after consultation	8 hrs	3 pts	Major	Wanasinghe
013	See estimated arrival time of vet for home visits	8 hrs	3 pts	Major	Wanasinghe
014	Monitor vet activity and performance	10 hrs	5 pts	Major	Wanasinghe
015	View pet health history overview	8 hrs	3 pts	Major	Wanasinghe
018	Categorize pets by type or health status	10 hrs	5 pts	Major	Wanasinghe

019	Access reports on treatments and medications	12 hrs	8 pts	Major	Wanasinghe
020	Generate financial reports (billing, payments)	10 hrs	5 pts	Major	Abesinghe

3.2.3 Large (31 - 50 Estimated Hours)

Effort Level: May span more than one Sprint. Split into Epics or tasks in planning.

Story Points: 13, 21

Order ID	User Story	Estimated Hours	Story Points	Priority	Assignee
001	Optimize multiple vet home visit routes	40 hrs	13 pts	Critical	Gamlath
002	Generate comprehensive reports on pet health records	40 hrs	13 pts	Critical	Wanasinghe
003	Track total medical expenses and treatments per pet	40 hrs	13 pts	Critical	Abesinghe

3.2.4 Extra Large (51+ Estimated Hours)

Effort Level: Complex functionality. Break into Epics or several Sprints.

Story Points: 21, 34, 55

Order ID	User Story	Estimated Hours	Story Points	Priority	Assignee
022	Browse listed pet products	50 hrs	21 pts	Critical	Rathnayake
023	Check current price for pet services or products	50 hrs	21 pts	Major	Rathnayake, Abesinghe
024	Chat with sellers or service providers for price negotiation	50 hrs	21 pts	Major	Rathnayake
025	Receive notifications for pet service requests or product interests	50 hrs	21 pts	Normal	Rathnayake, Gamlath
027	Calculate staff monthly salaries	50 hrs	21 pts	Major	Kavindu, Abesinghe

Question 04

Sprint 1 (weeks 1–2): user & appointment management basics

Product outcome: core user management functionalities (registration, login, profile update) and basic appointment scheduling.

Order ID	User Story	Estimated Hours	Story Points	Priority	Assignee
001	Register with email and phone number	10 hrs	3 pts	Show-Stopper	Kavindu
002	Log in securely with password	8 hrs	3 pts	Show-Stopper	Kavindu
003	Reset password via email verification	8 hrs	3 pts	Show-Stopper	Kavindu
004	Update profile information	6 hrs	2 pts	Show-Stopper	Kavindu
005	Manage and verify user accounts	10 hrs	3 pts	Show-Stopper	Kavindu
006	Request appointment by selecting service and date	12 hrs	5 pts	Show-Stopper	Gamlath
007	Track appointment status	12 hrs	8 pts	Major	Gamlath
008	Notify user about appointment confirmation	6 hrs	2 pts	Major	Gamlath

Total estimated hours: 72hrs

Sprint outcome: users can register, log in, and manage profiles. They can request appointments, track status, and receive notifications.

Sprint 2 (weeks 3–4): medical record & advanced appointment features

Product outcome: vets can manage medical records; the system supports reminders and appointment monitoring.

Order ID	User Story	Estimated Hours	Story Points	Priority	Assignee
009	Add new medical records for pets	10 hrs	5 pts	Critical	Wanasinghe
010	Update existing medical records	10 hrs	5 pts	Critical	Wanasinghe
011	View pet medical history	8 hrs	3 pts	Critical	Wanasinghe
012	Upload lab test results	8 hrs	3 pts	Major	Wanasinghe
013	Schedule follow-up appointments	8 hrs	3 pts	Major	Gamlath
014	Estimate treatment duration for appointments	8 hrs	3 pts	Major	Gamlath
015	Monitor vet activity and performance	10 hrs	5 pts	Major	Gamlath
016	Track pet health metrics	12 hrs	8 pts	Critical	Wanasinghe
017	Access medical reports for pets	12 hrs	8 pts	Major	Wanasinghe

Total estimated hours: 86 hrs

Sprint outcome: vets can manage medical records, monitor pets' health, and schedule follow-ups. Users can track treatment progress.

Sprint 3 (weeks 5–6): product & payment management and final features

Product outcome: complete product with pet product sales, payments, and full functionality

Order ID	User Story	Estimated Hours	Story Points	Priority	Assignee
018	View pet product catalog	8 hrs	3 pts	Major	Rathnayake
019	Add new pet products	10 hrs	5 pts	Major	Rathnayake
020	Categorize products by type	12 hrs	8 pts	Major	Rathnayake
021	Generate monthly sales report	12 hrs	8 pts	Major	Abeysinghe
022	Browse and order products online	50 hrs	21 pts	Critical	Rathnayake
023	Check product pricing and stock availability	50 hrs	21 pts	Major	Rathnayake
024	Receiving notifications for product orders	50 hrs	21 pts	Normal	Rathnayake
025	View payment and transaction history	10 hrs	5 pts	Major	Abeysinghe
026	Process staff salaries for vets and assistants	50 hrs	21 pts	Major	Abeysinghe

Total estimated hours: 252 hrs

Sprint outcome: complete product with pet product management, payment processing, and a fully functional veterinary management system ready for deployment.
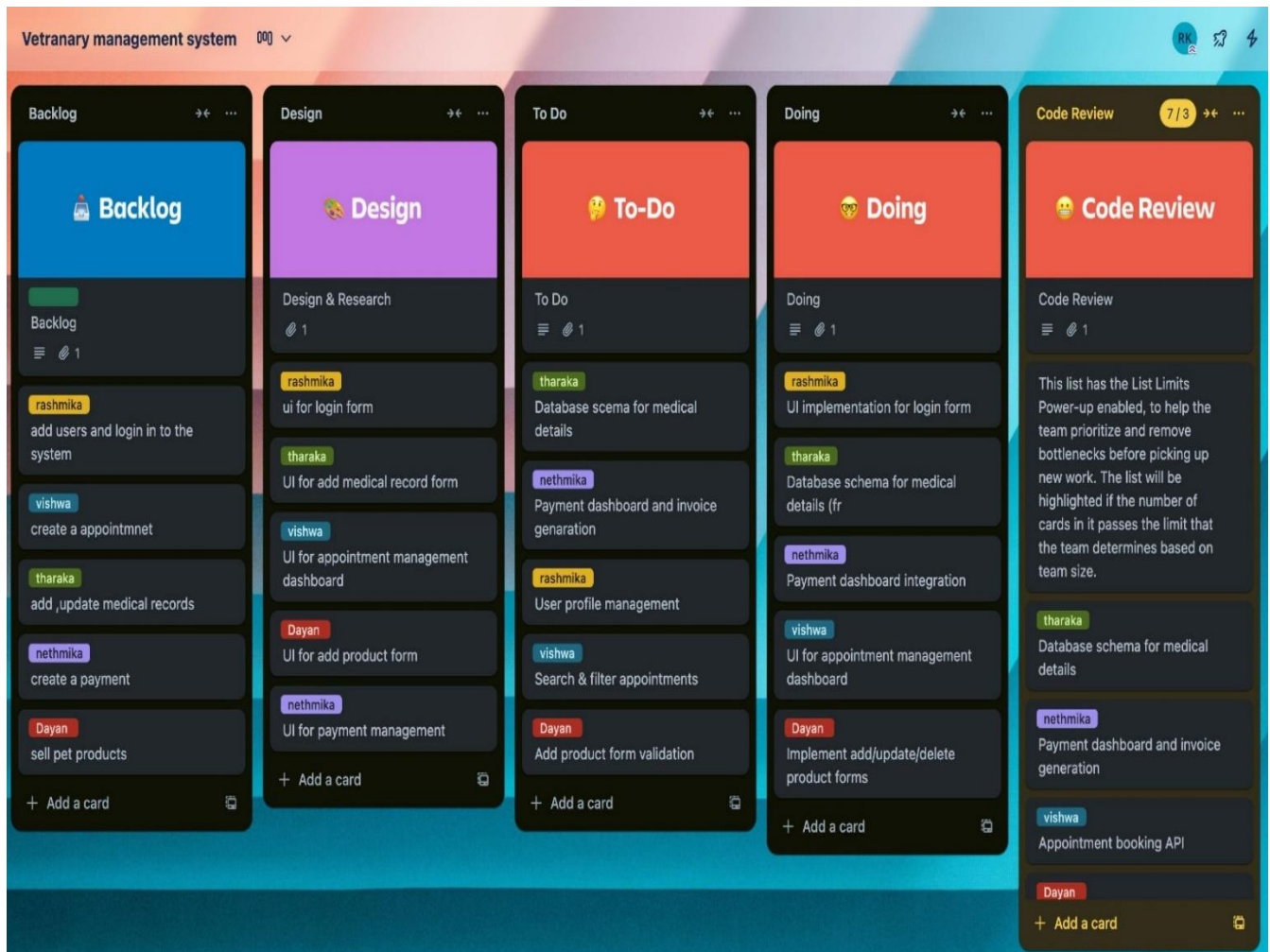
Summary of the 3 Sprints

Sprint	Product Outcome	Estimated Hours
Sprint 1	User Management and Appointment Management.	72 hrs
Sprint 2	Medical Record and Advanced Appointment Management.	86 hrs
Sprint 3	Pet Product Management, Payment and Final Features.	252 hrs
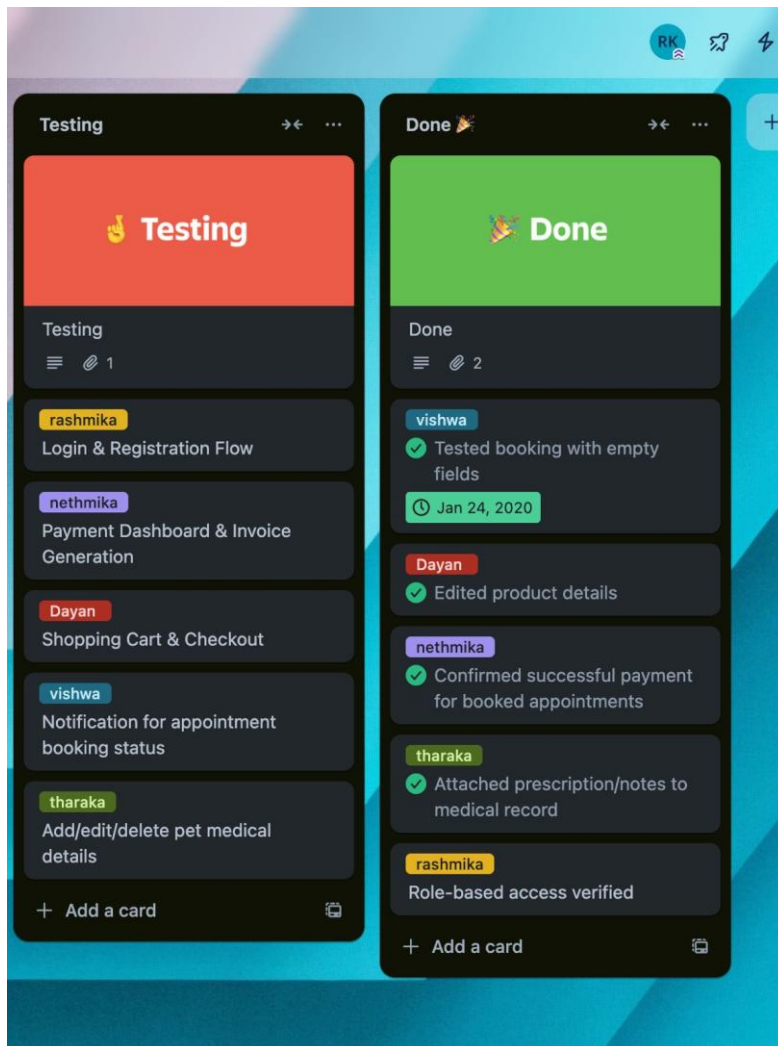
Question 05

Question 06

This Sprint Plan outlines the tasks allocated to each team member across three sprints, following Agile Scrum methodology. Each sprint delivers a working product increment, ensuring balanced workloads and addressing dependencies.

Sprint Duration :2 week
Effort Capacity per Sprint per Member: ~80 hours
Outcome of Each Sprint: Working product increment

Team Member	Tasks	Est. Hours
J.M.R Kavindu (User Management)	• User registration (pet owners, vets, admin) • Secure login with password/OTP • Reset password via email/phone • Update personal profile and settings • Admin verification and account management	10 + 8 + 8 + 8 + 10 = 44 hrs
K.G.V.K.D Gamlath (Appointment Management)	• Pet owner appointment request form (pet, symptoms, date) • System suggests available vets • Track appointment request status (pending, confirmed) • View appointment history	12 + 10 + 12 + 8 = 42 hrs

Outcome:
- Users can register, log in, and manage profiles.
- Pet owners can initiate and track veterinary appointments.

6.2. Sprint 2 Plan: Medical Records & Notifications

Team Member	Tasks	Est. Hours
W.M.D.T Wanasighe (Medical Record Management)	• Veterinarian uploads medical records • Store prescriptions and vaccination details • Update pet health history • Generate reports on medical history	10 + 12 + 10 + 8 = **40 hrs**
K.G.V.K.D Gamlath (Appointment Management)	• Vet accepts/rejects appointment requests • Assign vet, nurse, and consultation room • Update appointment status after consultation • Upload medical notes linked to pet record	10 + 10 + 8 + 10 = **38 hrs**

Outcome:

- Vets can manage consultations and store medical history.
- Appointment updates are reflected in medical records.

6.3. Sprint 3 Plan: Pet Product & Payment Management

Team Member	Tasks	Est. Hours
Rathnayaka W.P.D.D.W (Pet Product Management)	• List pet products (food, accessories, medicines) • Enable product search & filtering • Add to cart & checkout system • Notify owners of order confirmations	10 + 12 + 12 + 8 = **42 hrs**
Abesinghe A.M.B.N (Payment Management)	• Implement consultation fee payment system • Online payment for pet product orders • Generate financial reports (revenue, expenses) • Manage vet/staff salary details & payroll	12 + 12 + 10 + 10 = **44 hrs**

Outcome:

- Pet product marketplace is functional with checkout and notifications.
- Payment system handles both appointments and product purchases.
- Financial reports and payroll system are integrated**.**