American International University-Bangladesh (AIUB)

Department of Computer Science

Faculty of Science &Technology (FST)

Fall 24 25

Section: A

Software Quality Assurance and Testing

Pet Shop Management System

A Report Submitted By

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Checked By Industry Personnel (Optional)

Name:

Designation:

Company:

Sign:

Date:

Software Test Plan

for

Pet Shop Management System

Version 1.0 approved

Prepared by Aritra Basak Joy, Ashik Ibadullah, Md. Shahriar Parvez Shamim & A.SM Safatul Alam

03 February 2025

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Revision History

Revision	Date	Updated by	Update Comments
0.1	2025.01.09	Aritra Basak Joy	First Draft
0.2	2025.01.10	Aritra Basak Joy	Added Section 3 & 4
0.3	2025.01.13	Aritra Basak Joy	Added Section 5
0.4	2025.01.14	Ashik Ibadullah	Added Section 6
0.5	2025.01.17	Aritra Basak Joy	Added Section 7
0.6	2025.01.19	Ashik Ibadullah	Added Section 8, 9
0.7	2025.01.20	Md. Shahriar Parvez Shamim	Added Section 10, 11
0.8	2025.01.22	A.S.M Safatul Alam	Added Section 12, 13 & 14
1.0	2025.01.24	Aritra Basak Joy	Final Draft

1. TEST PLAN IDENTIFIER:RS-MTP01.3

2. REFERENCES

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3. INTRODUCTION

Background to the Problem

Pet shops encounter many challenges in their daily operations. They manage a range of products, services, and accessories. These stores must efficiently deal with inventory, customer service, scheduling, sales, & managing employees. If they do not have a good system in place, things can get messy quickly. Tasks may become inefficient, prone to errors, & take up a lot of time. Key challenges include:

1. Inventory Management Issues

Managing inventory is a major hurdle for pet shops. They carry various products like pet food, accessories, and medicines. Without an effective system, shops might end up overstocking or understocking items. Overstocking can waste money & space while risking spoilage—especially with food. Understocking means missing out on sales and disappointing customers when they cannot find what they need. Poor inventory management can lead to significant financial problems.

2. Customer Satisfaction and Service

Pet shops aim to meet diverse customer needs—from product advice to tailored services like grooming & veterinary. If service history is not tracked well, customers may have bad experiences which could hurt their loyalty. Imagine a groomer missing an appointment. This results in frustration and lost business. In this industry, where repeat customers matter greatly, failing to meet expectations can tarnish a shop's reputation.

3. Scheduling and Service Coordination

In addition to selling products, pet shops provide services like grooming & veterinary care. Managing appointments while matching staff availability is key for smooth operations. Without digital tools, scheduling gets chaotic leading to missed or double-booked appointments and unhappy customers.

4. Record Tracking and Management

Keeping track of records, whether for customers or employees, can be very tricky without digital solutions. A paper-based system makes it hard to find what you need quickly. For instance, checking a client's grooming history may take longer than it should, which leads to inefficiencies that bother both staff and customers. Mistakes in record-keeping can also increase the chance of showing incorrect services like offering the wrong type of grooming treatment.

5. Employee Management and Scheduling

Employee shift management is crucial too. Ensuring enough staff during busy times like weekends requires thoughtful planning. With no good system in place, tracking hours worked or performance becomes hard leading to grumpy employees or not enough help during peak times, which affects customer service.

Solution to the Problem

To tackle these operational issues faced by pet shops, an integrated Pet Shop Management System brings efficiency and better business results:

1. Automated Inventory Management
Use an automated inventory management tool that keeps tabs on stock levels while setting reorder points and giving real-time updates on what’s available.

Benefits:

- Alerts for overstock and low stock help dodge waste.
- Reduces financial hits from unsold items.
- Ensures more product availability leading to customers.

2. Centralized Scheduling System
Set up an online tool for managing appointments related to grooming and vet visits while making it easy for staff to check schedules.

Benefits:

- Helps avoid scheduling issues & missed appointments.
- Increases customer satisfaction by reducing mistakes in scheduling.

3. Digital Record Management System
Introduce a digital record-keeping platform that consolidates all employee & customer info, making retrieval effortless.

Benefits:

- Reduces errors and delays in finding and updating information, allowing staff to provide accurate services.
- Ensures that services like grooming or medical care are tailored to each pet's needs by tracking their history and preferences.

4. Implementation Benefits:

- **Efficiency:** Streamlining various processes means spending less time on tasks which reduces mistakes.
- **Cost Savings:** Better inventory control helps avoid excessive waste while accurate scheduling improves productivity.
- **Better Decision Making:** Owners gain insights from advanced reports & analytics for smarter business growth strategies.

By using a strong integrated digital system, pet shops can overcome operational blocks while elevating customer satisfaction—leading to overall success.

4. REQUEIREMNT SPECIFICATION

4.1 System Features

1. System Login

Functional Requirements-

1.1 The software shall allow users to log in with their given username and password.

1.2 If the username and/or password has been entered incorrectly more than three times, the system shall generate a random verification code to retry login.

1.3 If the number of login attempts exceeds its limit (5 times), the system shall block the user account for one hour [optional function].

- Priority Level: High
- Precondition: User must have a valid user ID and password.

2. HR Functional Requirements

Functional Requirements-

2.1 The system shall allow HR to add, edit, or remove users (HR, receptionist, groomer, veterinary).
2.2 HR shall be able to view and manage user roles and permissions.
2.3 HR shall be able to add, edit, or remove customer information and view customer profiles.
2.4 The system shall allow HR to edit or delete employee status.
2.5 HR can edit or delete customer general information (phone number, address) and change their status.
2.6 HR shall be able to add, edit, or delete homepage content such as pictures, product name, price, and offers, and change their status.
2.7 HR shall be able to manage "About Us" content by adding, editing, or deleting pictures, descriptions, and videos.
2.8 HR shall be able to manage "Contact Us" content by adding, editing, or deleting pictures, descriptions, videos, and general information.
2.9 HR shall manage blogs by adding, editing, or deleting pictures, descriptions, and videos and changing their status.

- **Priority Level**: High
- **Precondition**: HR must be logged into the system.

3. Customer Functional Requirements

Functional Requirements-

3.1 The system shall allow customers to register by creating an account and providing details (pet details, phone number, address, email).
3.2 Customers shall be able to view shop details, services, and prices.
3.3 Customers shall be able to contact the shop through provided phone numbers, email, or Instagram via "Contact Us."
3.4 The system shall allow customers to book grooming or veterinary appointments.
3.5 Customers shall be able to add items (pet food, accessories, medicines) to the cart for purchase.

- **Priority Level**: High
- **Precondition**: Customer must have a valid account.

4. Receptionist Functional Requirements

Functional Requirements-

4.1 The system shall allow receptionists to add, edit, or delete shop information visible to customers (product name, quantity, picture, price, description, delivery information) and change the status.
4.2 Receptionists shall be able to manage inventory by updating product names, quantities, and prices.
4.3 The system shall allow receptionists to schedule grooming or veterinary appointments on behalf of customers.
4.4 Receptionists shall manage rescheduling of appointments.

- **Priority Level**: High
- **Precondition**: Receptionist must be logged into the system.

5. Groomer Functional Requirements

Functional Requirements-

5.1 Groomers shall be able to view all upcoming grooming appointments for the day or week.
5.2 The system shall ensure reliability by providing consistent access to appointment schedules.
5.3 The system shall provide quick loading of grooming schedules for optimal performance.

- **Priority Level**: High
- **Precondition**: Groomer must be logged into the system.

6. Veterinary Functional Requirements

Functional Requirements-

6.1 Veterinarians shall be able to view all scheduled veterinary appointments.

- **Priority Level**: High
- **Precondition**: Veterinary must be logged into the system.

7. System-Wide Functional Requirements

Functional Requirements-

7.1 The system shall provide user authentication and role-based access control to ensure users can access only functionalities relevant to their roles (Super Admin, HR, Receptionist, Customer, Groomer, Veterinary).
7.2 The system shall send automatic notifications and reminders for appointments, new services, and product restocking.
7.3 The system shall generate analytical reports (stocks, appointments, employee details) for Super Admin, Receptionist, and HR.

- **Priority Level**: High
- **Precondition**: System must be properly configured with user accounts and permissions.

4.2 System Quality Attributes

- Performance: The web application's load time should be as minimum as possible.
- Reliability: The web application should have almost 100% data backup capability and less data loss possibilities.
- Availability: The web application can be used to take the necessary services at any time.
- Maintainability: If any kind of error occurs, then it is easily recoverable within a short period of time.
- Recoverability: If a major incident happens to a web application, then it is recoverable within 2-3 hours.

- Capacity- Make sure that, web application does not crash when a lot of user visit the website at the same time.
- Data Integrity: The system is able to store all of the necessary data for updates in the database.
- Interoperability: The web application is based on a service-oriented architecture.
- Usability: This web application should be user friendly and easy to use.
- Security: All sensitive data must be encrypted.

4.3 System Interface

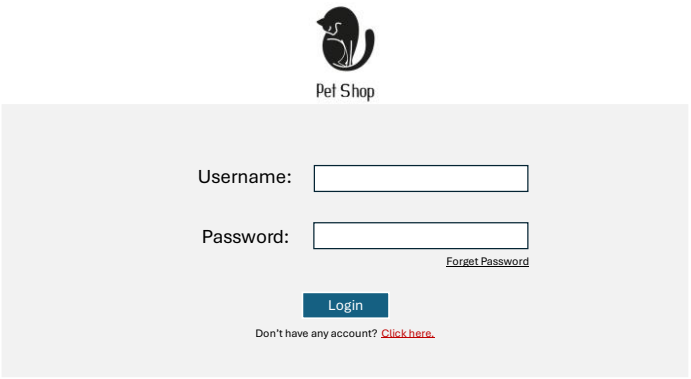


Fig-1: Log In page

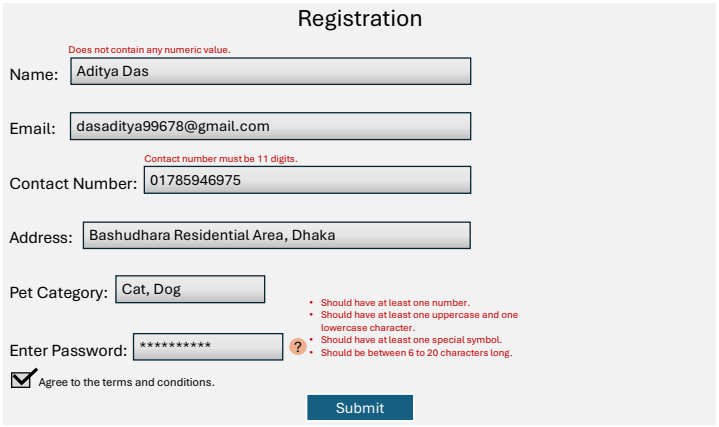


Fig-2: Registration Page

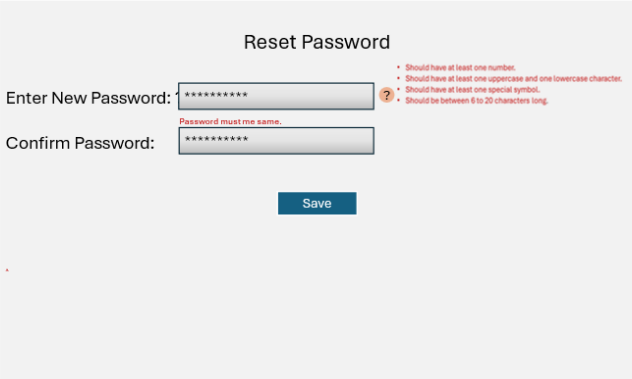


Fig-3: Password Reset Page

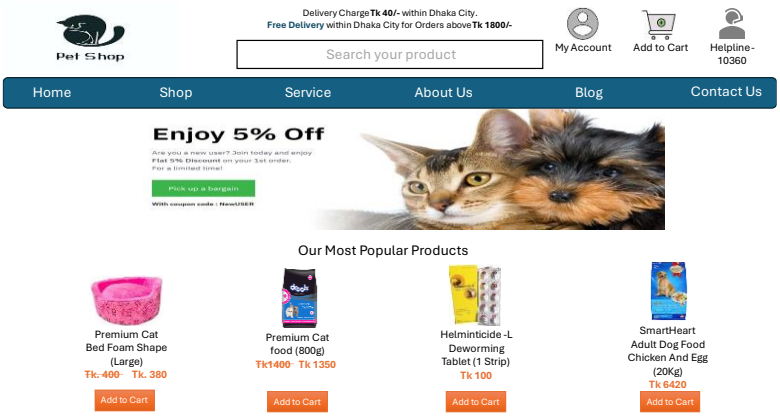


Fig-4: Main Page View

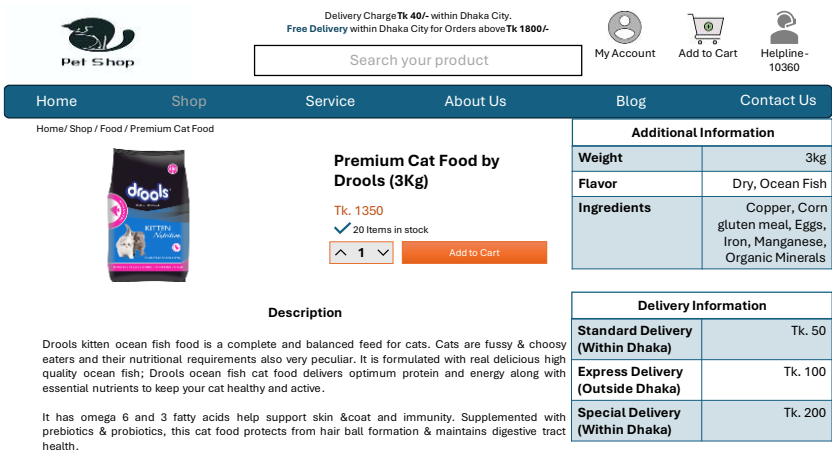


Fig-5: Product On Board

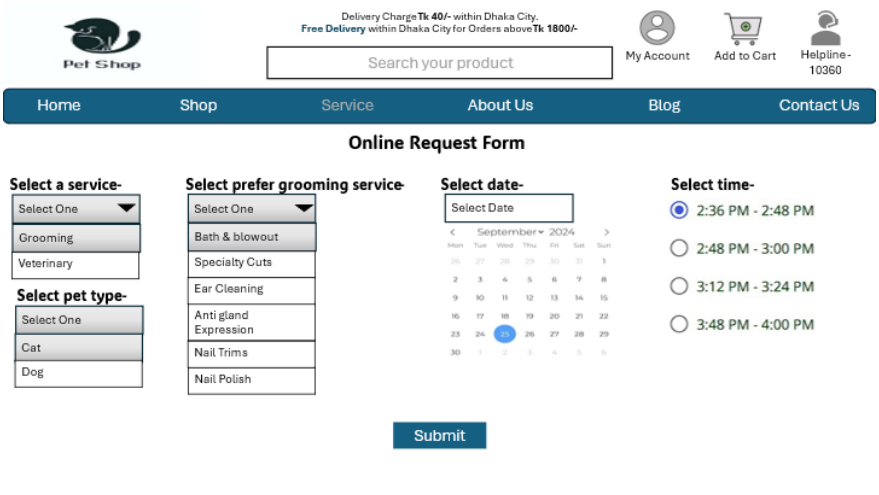


Fig-6: Appointment Taking Page

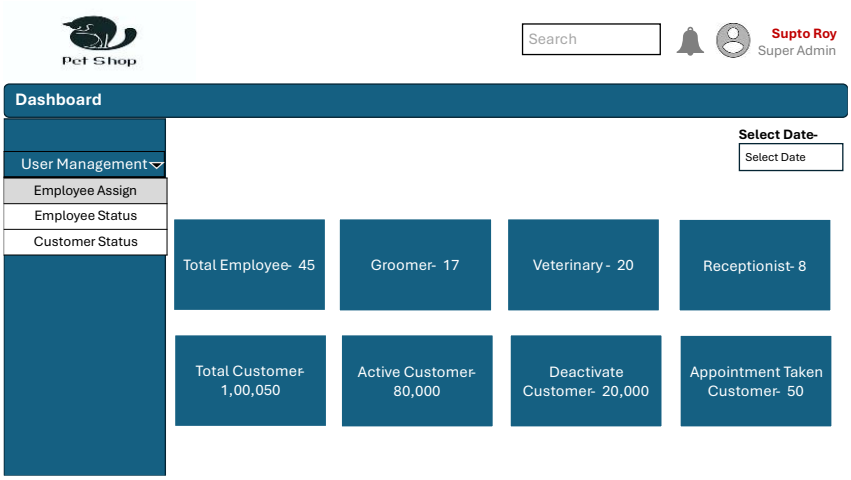


Fig-7: Super Admin Dashboard

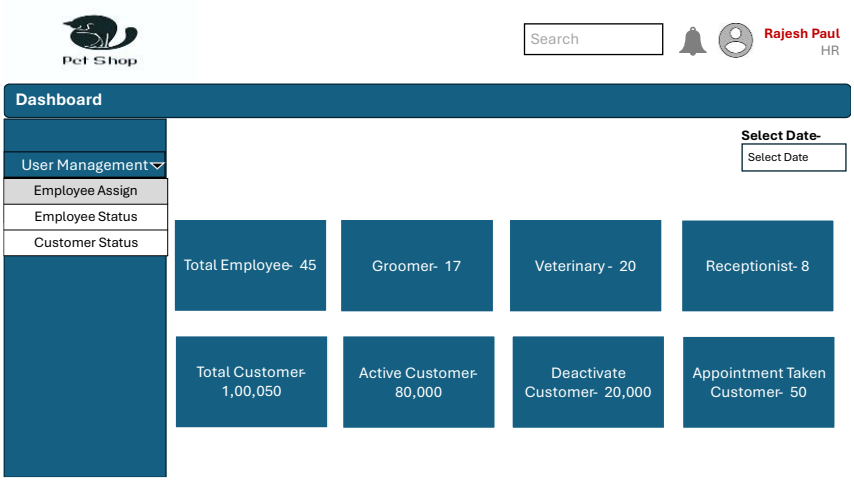


Fig-8: HR Dashboard

Fig-9: Receptionist Dashboard

Fig-10: Groomer Dashboard

Fig-11: Veterinary Dashboard

4.4 Project Requirements

1. Time Estimation

- We are using the **COCOMO (Constructive Cost Model)** to estimate the software development effort and time. As this project is an **intermediate-level project**, the team has mixed experience, dealing with semi-rigid requirements.
- **Key Variables**:
  - **SLOC (Source Lines of Code)**: 100,000 lines (100K SLOC).
  - **Coefficient**: 3.30 (for Semi-Detached projects).
  - **Project Complexity (P)**: 1.15.
  - **SLOC-dependent coefficient (T)**: 0.36.

- **Effort (PM)**:
  PM = Coefficient × (SLOC / 1000) ^ P
  PM = 3.30 × (100 / 1000) ^1.15 ≈ **658.44 Person-Months**.

- **Development Time (DM)**:
  DM = 2.52 × (PM)^T
  DM = 2.52 × (658.44) ^0.36 ≈ **26 Months** (includes maintenance phase).

- **Average Staffing (ST)**:
  ST = PM / DM
  ST = 658.44 / 26 ≈ **26 Persons**.

Testing Time:

- Testing typically takes 20-30% of the total development time.

Testing Time Calculation:
Testing Time = Total Development Time × Testing Time (%)
Testing Time = 26 × 0.20 to 0.30 ≈ **5.2 to 7.8 Months**.

2. Budget Estimation

We use Agile methodology, which divides the development into sprint runs. The budget is calculated as follows:

Sprint Runs:
Each sprint handles 10,000 SLOC. For 100,000 SLOC:

Number of Sprint Runs = 100,000 / 10,000 = 10 Sprints.

Cost per Sprint:
Estimated cost per sprint = 20,000 BDT.

Sprint Run Cost:
Total Sprint Run Cost = Number of Sprints × Cost per Sprint
= 10 × 20,000 BDT = 200,000 BDT.

Contingency:
Contingency is 5% of the total sprint cost.
Contingency = 200,000 × 0.05 = 10,000 BDT.

Quality Assurance (SQA):
Testing cost per test case = 2,000 BDT.
Number of test cases = 27
SQA Cost = 27 × 2,000 = 54,000 BDT.

Maintenance:
Maintenance costs approximately 25% of the total cost till the SQA phase.
Maintenance Cost = (200,000 + 10,000 + 54,000) × 0.25 = 66,000 BDT.

Total Budget:

Budget Component	Cost (BDT)
Sprint Run Cost	200,000
Contingency	10,000
SQA Cost	54,000
Maintenance Cost	66,000
Total Budget	**330,000**

3. Resource Requirements

- **Effort (PM)**: 658.44 Person-Months.
- **Development Time (DM)**: 26 Months.
- **Average Staffing (ST)**: 26 Persons.

Team Composition:

- **Developers**: 20 Developers (mix of experienced and unexperienced).
- **Project Manager**: 1 Project Manager.
- **Senior SQA Engineers**: 2 Engineers.
- **Junior SQA Engineers**: 3 Engineers.
- **Team Lead**: 1 Team Lead.

Infrastructure Requirements:

- Computers, software, and hardware tools.
- Office space with a collaborative working environment.
- Other necessities like internet connectivity and cloud storage.

4. Environment Setup

Agile Environment:

- An open workspace to encourage collaboration.
- Regular team meetings (e.g., daily stand-ups, sprint reviews).
- Shared team areas for enhanced communication and productivity.

Team Practices:

- Assign specific modules to individual developers or teams for efficient progress.
- A shared repository for version control and documentation.
- A clear schedule with well-defined milestones for sprints and testing phases.

5. FEATURES NOT TO BE TESTED

- A third-party API that is obtained from a payment handler will be the payment module utilized in the web application. The software development and testing teams are not responsible for determining if the payment module is accepting payments correctly. The payment provider will test this.

- Open source 2FA applications that are accessible for free will be used to implement the 2FA authentication system. The testing scope of this test plan does not include determining whether the 2FA code is produced correctly. Since all the 2FA provider's implementation criteria will be upheld in the web application, it must be tested by the provider.

6. TESTING APPROACH

6.1 Testing Levels

The testing for the "Pet Shop Management System" will be carried out through the following phases:

- Unit Testing
- Control Flow Testing
- Domain Testing
- Integration Testing
- System Testing
- Acceptance Testing

Each phase of testing will involve specific tasks, and different roles in the project will be responsible for performing these tests. Here's a breakdown of the phases and responsibilities:

- **Unit testing**: Unit testing will be performed by individual developers who are responsible for specific modules of the system. Developers should document their testing efforts clearly. This documentation will include:
  - A list of expected test cases for each module with outcomes.
  - Results of the tests with sample outputs.
  - Details on any bugs found, with suggestions for fixes.

The team leader will review the unit testing documentation and approve it. Only after this approval will the module move to control flow testing. Unit testing documentation will also be shared with the testing team.

- **Control Flow testing**: Control flow testing will be done by developers to ensure that the code modules execute in the correct sequence. This will be performed when core modules are ready to be integrated. Techniques like basic path testing and condition coverage will be used to test all possible code paths. The results of these tests will be documented and included in the unit test materials for review.

- **Domain testing**: Developers will conduct domain testing to verify that each module works as expected within the pet shop domain. This will include testing boundary conditions, invalid inputs, and other special cases. Any bugs identified during domain testing will be fixed and sent back for revision. Like control flow testing, domain testing results will be documented and included with the unit testing materials.

- **Integration testing**: The test manager, along with the development team leader, will conduct integration testing. This phase ensures that all modules work together seamlessly and exchange data correctly when integrated into the full system. Integration testing will be manual, using test cases and observing system behavior. Modules will only be eligible for integration testing after critical bugs are resolved. A maximum of three major issues may remain as long as they don't interfere with the integration process.

- **System testing**: The test manager will lead system testing with support from the development team. System testing evaluates the entire pet shop management system's functionality, performance, security, and compatibility. Testing will simulate real-world scenarios through a combination of scripted tests, exploratory tests, and user scenarios. Any issues found will be fixed before proceeding to the next phase.

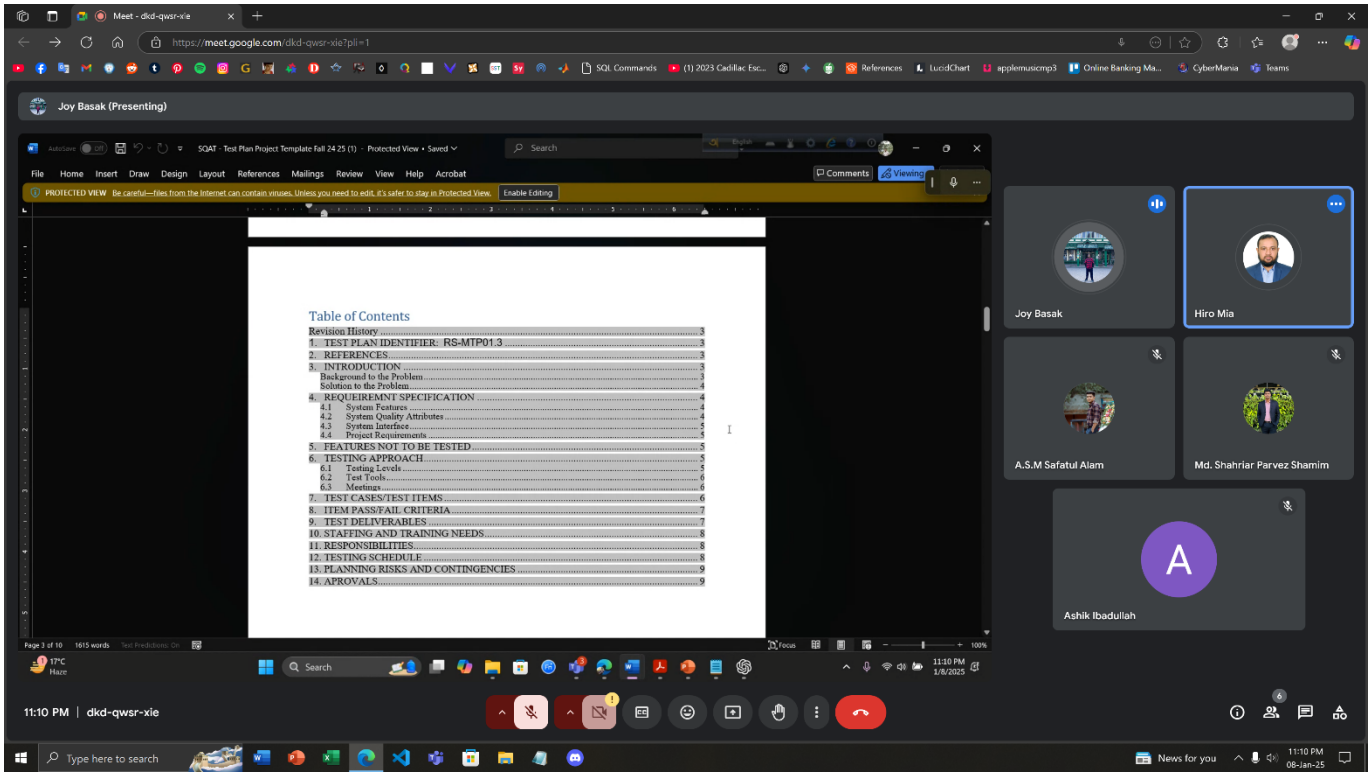
- **Acceptance testing**: Acceptance testing will be conducted by actual end users of the system, overseen by the test manager and the testing team. The goal is to ensure the system meets the needs of users and is ready for deployment. This phase will be split into three stages:
    - Internal Testing: The testing team will test the system from the user's perspective over a period of one week. If needed, adjustments will be made based on the requirements.
    - Client Testing: After internal testing, the system will be handed to the client for further testing for 2-3 weeks. The client will provide feedback on bugs or suggested improvements.
    - Beta Testing: The system will be released to a small group of users for feedback. Beta testing will last for 2 weeks, gathering data on user experiences. Any issues reported will be reviewed and addressed before final deployment.

6.2 Test Tools

The tools will be used to test the software by the software testing team:

- **Selenium IDE**: Used for creating and executing automated browser-based tests to ensure the system's UI behaves as expected.
- **Apache Maven**: Manages project dependencies and builds automation for a seamless testing and deployment process.
- **BDD - Cucumber Framework**: Enables behavior-driven development by allowing tests to be written in plain language for better collaboration with stakeholders.
- **TestNG**: Provides a robust testing framework for unit, integration, and end-to-end testing with advanced reporting and test organization.
- **Allure**: Generates visually appealing and detailed test reports to track testing outcomes and system quality effectively.

6.3 Meetings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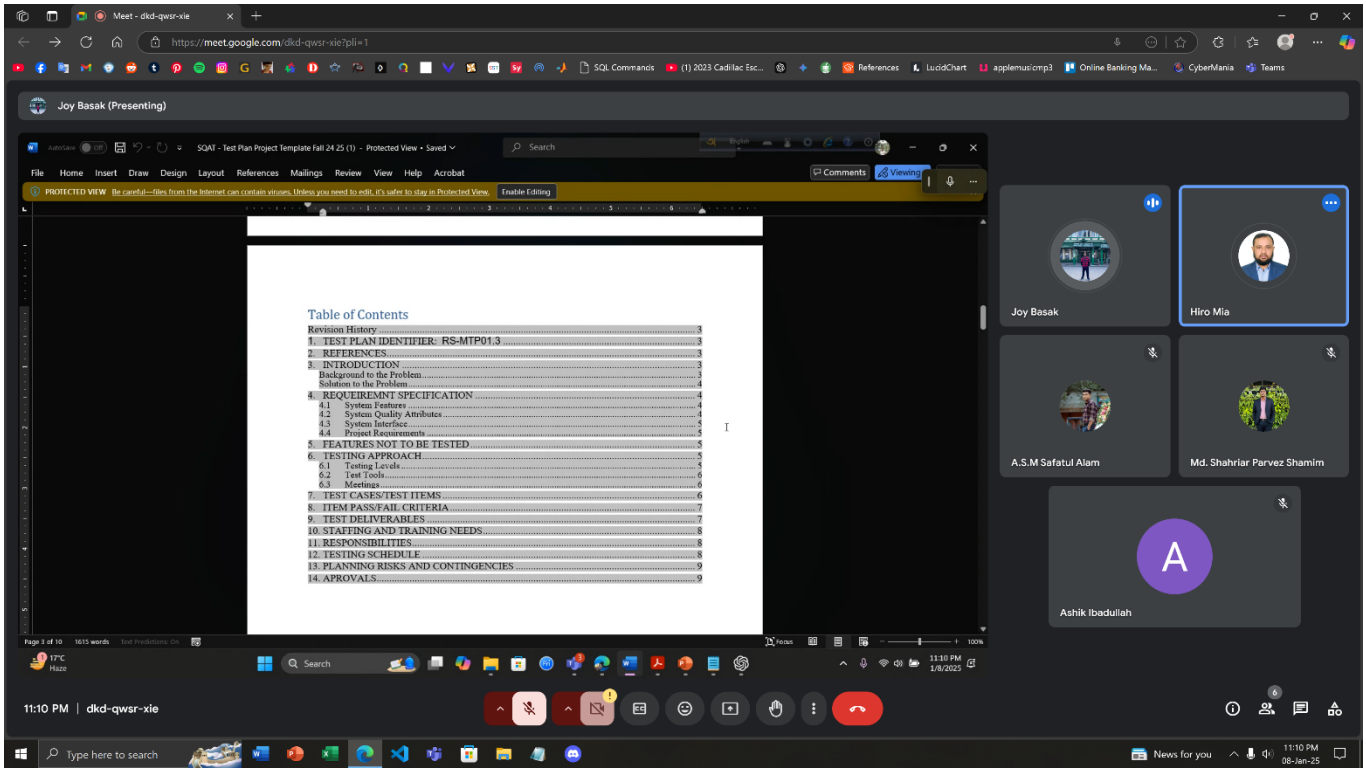
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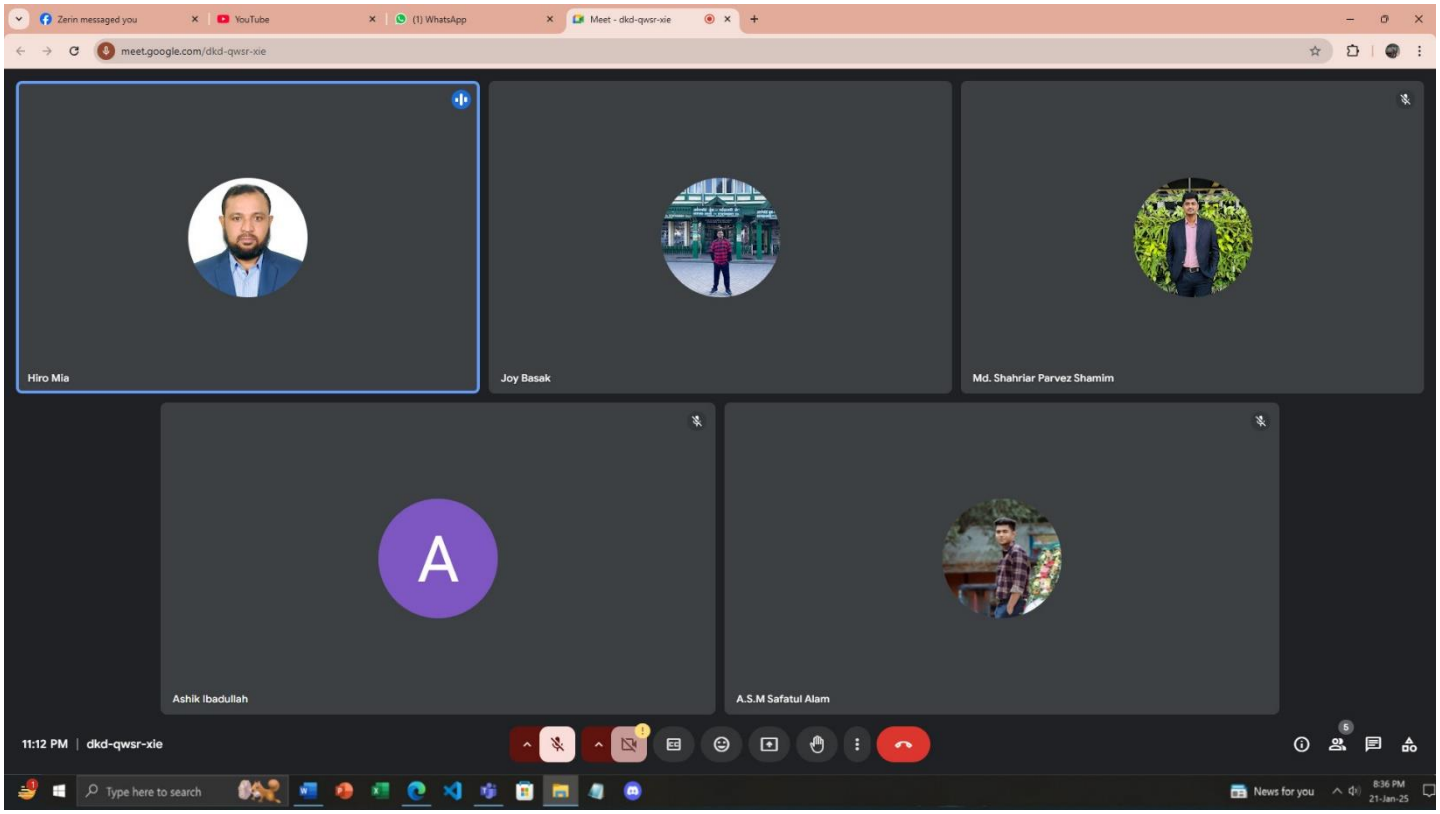
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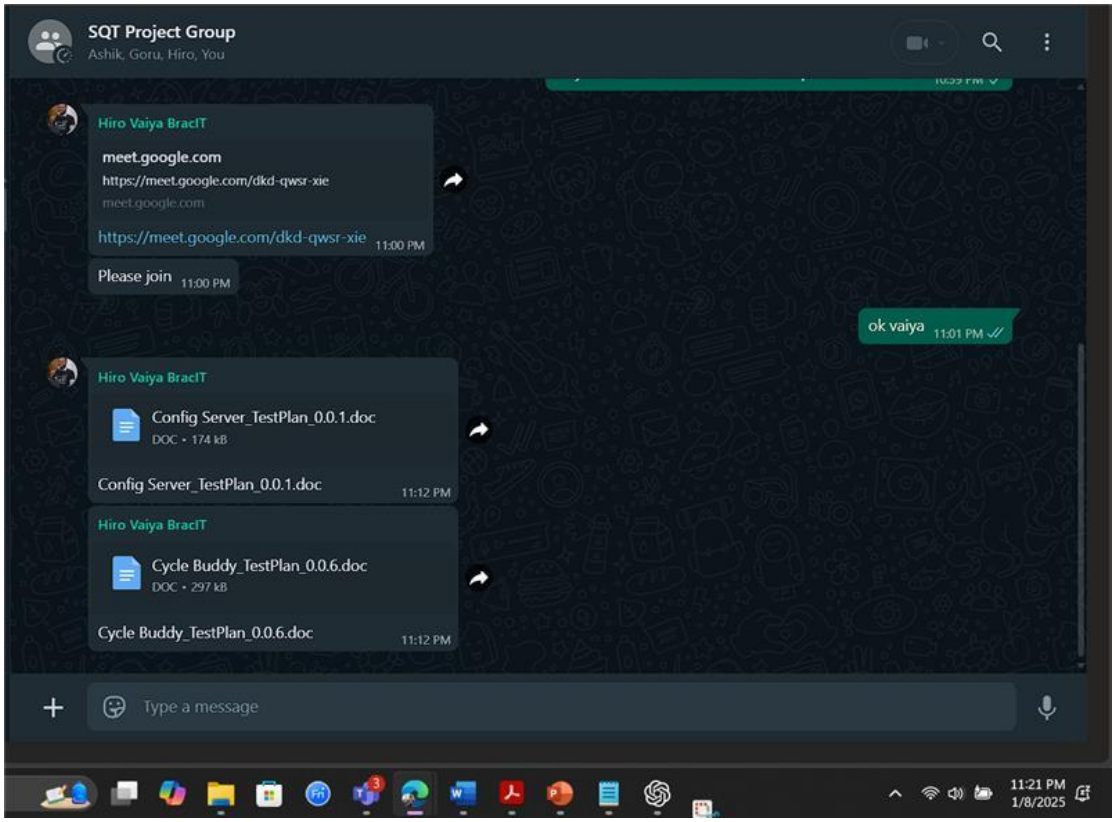
SQT Project Group
Ashik, Goru, Hiro, You
Hiro Vaiya BracIT
meet.google.com
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1/8/2025

7. TEST CASES/TEST ITEMS

Test-1: For Login Session

Project Name: Pet Shop Management System			Test Designed by: Safatul	
Test Case ID: PSMS_01			Test Designed date: 10-01-2025	
Test Priority (Low, Medium, High): High			Test Executed by: Aritra	
Module Name: Login Session			Test Execution date: 12-01-2025	
Test Title: Verify login with valid credentials				
Description: Test the functionality of user login with valid credentials.				
Precondition (If any): User must have a registered account.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Navigate to the login page	N/A	Login page is displayed	As expected	Pass
2. Enter valid username and password	Username: dasaditya, Password: @991!x_AiuB	Credentials are accepted	As expected	Pass
3. Click on the "Login" button	N/A	User is redirected to the dashboard	As expected	Pass
Post Condition: The user is successfully logged into the system and redirected to the dashboard.				

Test-2: For Registration Module

Project Name: Pet Shop Management System	Test Designed by: Safatul
Test Case ID: PSMS_02	Test Designed date: 10-01-2025
Test Priority (Low, Medium, High): High	Test Executed by: Aritra
Module Name: Registration	Test Execution date: 12-01-2025
Test Title: Validate registration form input fields.	
Description: Ensure the registration form enforces all validation rules.	
Precondition (If any): User is on the registration page.	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Enter a name without numeric characters	Name: "dasaditya99"	Error message: "Name should not contain numeric characters"	As expected	Pass
2. Enter an invalid email forma	Email: "dasadi91@com"	Error message: "Invalid email format"	As expected	Pass
3. Enter a contact number with less digits	Contact Number: "01735678"	Error message: "Contact number must be 11 digits"	As expected	Pass
4. Enter a weak password	Password: "12345"	Error message: "Password must meet specified criteria"	As expected	Pass
5. Agree to terms and submit	Terms: Checked	Form does not submit if errors exist	As expected	Pass

Post Condition: The form displays error messages for invalid fields and does not submit until all fields are correctly validated.

Test-3: For Product Search Module

Project Name: Pet Shop Management System	Test Designed by: Safatul
Test Case ID: PSMS_03	Test Designed date: 10-01-2025
Test Priority (Low, Medium, High): Medium	Test Executed by: Aritra
Module Name: Product Search	Test Execution date: 12-01-2025
Test Title: Validate product search feature	
Description: Ensure the search functionality returns relevant results based on the entered product name.	
Precondition (If any): Products are available in the database..	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Enter a product name	Product Name: "Cat Food"	Matching products are displayed in the search results	As expected	Pass
2. Click the "Search" button	N/A	Search results are loaded	As expected	Pass
Post Condition: Relevant products matching the search query are displayed in the search results.				

Test-4: For Shopping Cart Module

Project Name: Pet Shop Management System			Test Designed by: Safatul	
Test Case ID: PSMS_04			Test Designed date: 10-01-2025	
Test Priority (Low, Medium, High): High			Test Executed by: Aritra	
Module Name: Shopping Cart			Test Execution date: 12-01-2025	
Test Title: Verify products can be added to the cart				
Description: Ensure that selected products are added to the cart and displayed with accurate details.				
Precondition (If any): User is logged in.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Navigate to the product page	N/A	Product details are displayed	As expected	Pass
2. Click "Add to Cart" for a product	Product: "Cat Food"	Product is added to the cart	As expected	Pass
3. Check the cart	N/A	Product appears in the cart with correct details	As expected	Pass
Post Condition: The cart is updated with the selected product and displays its name, price, and quantity correctly.				

Test-5: For Appointment Management Module

Project Name: Pet Shop Management System	Test Designed by: Safatul
Test Case ID: PSMS_05	Test Designed date: 11-01-2025
Test Priority (Low, Medium, High): High	Test Executed by: Aritra
Module Name: Appointment Management	Test Execution date: 14-01-2025
Test Title: Test the appointment scheduling feature for grooming services	
Description: Ensure users can schedule grooming appointments successfully.	
Precondition (If any): Grooming services are available.	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Navigate to the "Appointment" section	N/A	The appointment scheduling page is displayed	As expected	Pass
2. Select a grooming service, date, and time	Service: "Ear Cleaning" Date: "12-01-2025" Time: "10:00 AM"	Selected service, date, and time are highlighted and displayed	As expected	Pass
3. Submit the appointment request	N/A	Appointment is scheduled, and a confirmation message appears	As expected	Pass
Post Condition: The appointment is successfully added to the system and displayed in the user's appointment list.				

Test-6: For Dashboard

Project Name: Pet Shop Management System			Test Designed by: Safatul	
Test Case ID: PSMS_06			Test Designed date: 12-01-2025	
Test Priority (Low, Medium, High): High			Test Executed by: Aritra	
Module Name: Dashboard			Test Execution date: 14-01-2025	
Test Title: Verify that the dashboard displays the correct data for different roles				
Description: Ensure the dashboard accurately displays data based on the user's role.				
Precondition (If any): User is logged in with specific roles.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Log in as "Super Admin."	Role: Super Admin	Dashboard shows total employees, customers, and appointments	As expected	Pass
2. Verify data displayed	N/A	Data displayed matches the database records	As expected	Pass
3. Repeat for "HR" and "Receptionist" roles	Role:HR Role:Receptionist	Dashboard shows data relevant to each logged-in user's role	As expected	Pass
Post Condition: Dashboard data is validated and accurately reflects the information specific to the logged-in user's role.				

Test-7: Password Reset Module

Project Name: Pet Shop Management System	Test Designed by: Safatul
Test Case ID: PSMS_07	Test Designed date: 12-01-2025
Test Priority (Low, Medium, High): High	Test Executed by: Aritra
Module Name: Login Session	Test Execution date: 14-01-2025
Test Title: Verify Password Reset Functionality	
Description: Test the functionality of the password reset feature.	
Precondition (If any): User has a registered email.	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Navigate to the login page.	N/A	Login page is displayed.	As expected	Pass
2. Click "Forget Password"	N/A	Password reset form is displayed.	As expected	Pass
3. Enter the registered email address.	Email: dasadi91@gmail.com	Email is accepted and OTP is sent.	As expected	Pass
4. Verify the OTP received in the email.	OTP: 236458	OTP is verified successfully.	As expected	Pass
5. Enter a new password and confirm it.	New Password: dasadi31@Ho_Wow	Password is accepted and updated.	As expected	Pass
6. Click "Reset Password"	N/A	User is redirected to the login page.	As expected	Pass
7. Login with the new password.	Username: dasaditya, Password: dasadi31@Ho_Wow	Login successful.	As expected	Pass

Post Condition: The user's password is successfully reset, and they can log in with the new password.

Test-8: Stock Quantity Check Module

<table>
<tr><td colspan="4">Project Name: Pet Shop Management System</td><td>Test Designed By: Shamim</td></tr>
<tr><td colspan="4">Test Case ID: PSMS_08</td><td>Test Design’s Date: 9/1/2025</td></tr>
<tr><td colspan="4">Test Priority: High</td><td>Test Executed By: Safatul</td></tr>
<tr><td colspan="4">Module Name: Product Management</td><td>Test Execution Date: 20/1/2025</td></tr>
<tr><td colspan="5">Test Title: Product Filtering by Price</td></tr>
<tr><td colspan="5">Description: Ensure the user can filter products based on a selected price range.</td></tr>
<tr><td colspan="5">Precondition: Products should be available with varying prices in the system.</td></tr>
<tr><th>Test Steps</th><th>Test Data</th><th>Expected Results</th><th>Actual Results</th><th>Status</th></tr>
<tr><td rowspan="3">1. Login as User.
2. Go to Shop page.
3. Select Food or Accessories or Medicine
4. Set price range filter.
5. Apply and search.</td><td>Select: Food
Range: 500-1000</td><td>Only Food that fall within the selected price range are shown.</td><td>As expected</td><td>Pass</td></tr>
<tr><td>Select: Accessories
Range: 1000-1500</td><td>Only Accessories that fall within the selected price range are shown.</td><td>As expected</td><td>Pass</td></tr>
<tr><td>Select: Medicine
Range: 2000-2200</td><td>Only Medicine that fall within the selected price range are shown.</td><td>As expected</td><td>Pass</td></tr>
<tr><td colspan="5">Post condition: None</td></tr>
</table>

Test-9: Customer Support Module

<table>
<tr><td colspan="4">Project Name: Pet Shop Management System</td><td>Test Designed By: Shamim</td></tr>
<tr><td colspan="4">Test Case ID: PSMS_10</td><td>Test Design's Date: 9/1/2025</td></tr>
<tr><td colspan="4">Test Priority: High</td><td>Test Executed By: Aritra</td></tr>
<tr><td colspan="4">Module Name: Customer Support</td><td>Test Execution Date: 20/1/2025</td></tr>
<tr><td colspan="5">Test Title: Contact Us Details</td></tr>
<tr><td colspan="5">Description: Ensure the "Contact Us" system works by allowing users to send messages or calls.</td></tr>
<tr><td colspan="5">Precondition: The Contact Us system is accessible on the website.</td></tr>
<tr><th>Test Steps</th><th>Test Data</th><th>Expected Results</th><th>Actual Results</th><th>Status</th></tr>
<tr><td rowspan="2">1. Login as User.
2. Go to Contact us page.
3. Make call or email
4. Click Send</td><td>Making Phone call</td><td>The call was sent, processed by the system, and assistance was provided.</td><td>As expected</td><td>Pass</td></tr>
<tr><td>Sending Email</td><td>The email was sent, processed by the system, and assistance was provided.</td><td>As expected</td><td>Pass</td></tr>
<tr><td colspan="5">Post condition: The submitted email or the data about phone call is stored in the system, and the user receives confirmation of receipt.</td></tr>
</table>

Test-10: Order Checkout Module

Project Name: Pet Shop Management System				**Test Designed By**: Shamim
Test Case ID: PSMS_11				**Test Design's Date**: 9/1/2025
Test Priority: High				**Test Executed By**: Safatul
Module Name: Order Checkout				**Test Execution Date**: 20/1/2025
Test Title: Free Delivery Eligibility				
Description: Verify that free delivery is applied for orders above 1800 Taka.				
Precondition: The user has products in the shopping cart.				
Test Steps	**Test Data**	**Expected Results**	**Actual Results**	**Status**
1. Login as User. 2. Go to Shop page. 3. Add products to cart 4. Click checkout	None	If the total price exceeds 1800, a free delivery message will be displayed.	As expected	Pass
Post condition: Update the database to record that the delivery fee has been waived for the order.				

Test-11: User Access Management Module

Project Name: Pet Shop Management System				**Test Designed By**: Shamim
Test Case ID: PSMS_12				**Test Design's Date**: 9/1/2025
Test Priority: High				**Test Executed By**: Ashik
Module Name: User Access Management				**Test Execution Date**: 20/1/2025
Test Title: Role-Based Access Control				
Description: Ensure that each user role has appropriate access to the system's features.				
Precondition: Users are assigned specific roles (Super Admin, HR, Receptionist, etc.).				
Test Steps	**Test Data**	**Expected Results**	**Actual Results**	**Status**
1. Go to Login page 2. Enter Credentials as Super Admin or HR or Receiptionist or Groomer or Veterinary or Customer 3. Click login	Username: user2 Password: UseR12@	The user interface will include Shop, Services, My Account, and Contact Us.	As expected	Pass
	Username: HR123 Password: HRkk88@	The HR interface will include Customer Status, Employee Assign.	As expected	Pass
	Username: Admin12 Password: AdmiNN87@	The Super Admin interface will include User Management,Employee Management.	As expected	Pass
	Username: INV13 Password: INVuser3@	The Receiptionist interface will include Inventory Management, General Information.	As expected	Pass
	Username: VET34 Password: VeT786@	The Vetenary interface will include List of appointments, Filter by date.	As expected	Pass
	Username: Grom34 Password: GroM87#	The Groomer interface will include List of grooming appointments, Filter by date.	As expected	Pass
Post condition: Role-based access restrictions are maintained.				

Test-12: Product Management Module

<table>
<tr><td colspan="4">Project Name: Pet Shop Management System</td><td>Test Designed By: Shamim</td></tr>
<tr><td colspan="4">Test Case ID: PSMS_08</td><td>Test Design's Date: 9/1/2025</td></tr>
<tr><td colspan="4">Test Priority: High</td><td>Test Executed By: Safatul</td></tr>
<tr><td colspan="4">Module Name: Product Management</td><td>Test Execution Date: 20/1/2025</td></tr>
<tr><td colspan="5">Test Title: Product Filtering by Price</td></tr>
<tr><td colspan="5">Description: Ensure the user can filter products based on a selected price range.</td></tr>
<tr><td colspan="5">Precondition: Products should be available with varying prices in the system.</td></tr>
<tr><th>Test Steps</th><th>Test Data</th><th>Expected Results</th><th>Actual Results</th><th>Status</th></tr>
<tr><td rowspan="3">6. Login as User.
7. Go to Shop page.
8. Select Food or Accessories or Medicine
9. Set price range filter.
10. Apply and search.</td><td>Select: Food
Range: 500-1000</td><td>Only Food that fall within the selected price range are shown.</td><td>As expected</td><td>Pass</td></tr>
<tr><td>Select: Accessories
Range: 1000-1500</td><td>Only Accessories that fall within the selected price range are shown.</td><td>As expected</td><td>Pass</td></tr>
<tr><td>Select: Medicine
Range: 2000-2200</td><td>Only Medicine that fall within the selected price range are shown.</td><td>As expected</td><td>Pass</td></tr>
<tr><td colspan="5">Post condition: None</td></tr>
</table>

Test-13: Appointment Scheduling Module

<table>
<tr><td colspan="4">Project Name: Pet Shop Management System</td><td>Test Designed By: Shamim</td></tr>
<tr><td colspan="4">Test Case ID: PSMS_13</td><td>Test Design's Date: 9/1/2025</td></tr>
<tr><td colspan="4">Test Priority: High</td><td>Test Executed By: Aritra</td></tr>
<tr><td colspan="4">Module Name: Appointment Scheduling</td><td>Test Execution Date: 20/1/2025</td></tr>
<tr><td colspan="5">Test Title: Appointment Confirmation Notification</td></tr>
<tr><td colspan="5">Description: Ensure that the user receives a confirmation notification when an appointment is confirmed.</td></tr>
<tr><td colspan="5">Precondition: An appointment has been scheduled in the system.</td></tr>
<tr><th>Test Steps</th><th>Test Data</th><th>Expected Results</th><th>Actual Results</th><th>Status</th></tr>
<tr><td>1. Login as User.
2. Go to Service page by clicking Book an Appointment
3. Select service, pet type, prefer grooming service, date and time
4. Click Submit</td><td>Service:
Grooming

Select pet type:
Cat

Select groom service:
Bath & Blowout

Select date:
January 10, 2025

Select time:
4 PM – 5 PM</td><td>A confirmation message will be displayed, stating that the appointment has been confirmed. The user will also receive a notification on the website and an email receipt.</td><td>As expected</td><td>Pass</td></tr>
<tr><td colspan="5">Post condition: The appointment status is updated to "Confirmed" in database and the user is notified.</td></tr>
</table>

Test-14: Inventory Management Module

<table>
<tr><td colspan="4">Project Name: Pet Shop Management System</td><td>Test Designed By: Shamim</td></tr>
<tr><td colspan="4">Test Case ID: PSMS_14</td><td>Test Design's Date: 9/1/2025</td></tr>
<tr><td colspan="4">Test Priority: High</td><td>Test Executed By: Ashik</td></tr>
<tr><td colspan="4">Module Name: Inventory Management</td><td>Test Execution Date: 20/1/2025</td></tr>
<tr><td colspan="5">Test Title: Inventory Management (Add, Update, Delete and Show Products)</td></tr>
<tr><td colspan="5">Description: Ensure that inventory updates (adding or removing products) are handled correctly.</td></tr>
<tr><td colspan="5">Precondition: Inventory data exists and can be modified.</td></tr>
<tr><th>Test Steps</th><th>Test Data</th><th>Expected Results</th><th>Actual Results</th><th>Status</th></tr>
<tr><td rowspan="4">1. Login as Receptionist.
2. Click on Inventory Management Option.
3. Select Add or Edit or Delete option for specific products.
4. Click Submit</td><td>(Add)
Name: Cat Litter Box
Quantity: 4
Price: 600</td><td>Product is added, it will appear immediately on the list.</td><td>As expected</td><td>Pass</td></tr>
<tr><td>(Edit)
Name: Cat Litter Box
Quantity: 10
Price: 650</td><td>Product information is updated, the changes will be reflected instantly.</td><td>As expected</td><td>Pass</td></tr>
<tr><td>(Delete)
Select the product to delete</td><td>Product is deleted, it will no longer appear in the product list.</td><td>As expected</td><td>Pass</td></tr>
<tr><td>(Show)
No input</td><td>All product information will be displayed correctly.</td><td>As expected</td><td>Pass</td></tr>
<tr><td colspan="5">Post condition: The system should display the updated product information (quantity/price) accurately and store the data in database.</td></tr>
</table>

Test Case 15: Responsive Design

Project Name: Pet Shop Management System			Test Designed by: Ashik	
Test Case ID: PSMS_15			Test Designed date: 10-Jan-25	
Test Priority (Low, Medium, High): High			Test Executed by: Joy	
Module Name: Website UI/UX			Test Execution date: 11-Jan-25	
Test Title: Verify website's responsiveness across different devices				
Description: Ensure the website displays correctly and functions seamlessly on mobile, tablet, and desktop devices.				
Precondition (If any): Website is accessible on mobile, tablet, and desktop devices.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open the website on a mobile device. 2. Open the website on a tablet device. 3. Open the website on a desktop device.	N/A	The website should display correctly and allow for seamless navigation and functionality on all devices.	As expected	Pass
Post Condition: Website layout is confirmed as responsive on all devices.				

Test Case 16: User Deactivation

Project Name: Pet Shop Management System			Test Designed by: Ashik	
Test Case ID: PSMS_16			Test Designed date: 10-Jan-25	
Test Priority (Low, Medium, High): Medium			Test Executed by: Joy	
Module Name: User Management			Test Execution date: 11-Jan-25	
Test Title: Validate the functionality to deactivate a user				
Description: Ensure that the system allows for the deactivation of a user by Super Admin or HR.				
Precondition (If any): User is logged in as Super Admin or HR.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Navigate to "User Management" section.	N/A	The "User Management" section should load correctly.	As expected	Pass
2. Search for a user.	Username: test_user	User details should appear in the results.	As expected	Pass
3. Click "Deactivate" next to the user's name.	N/A	A confirmation dialog should appear.	As expected	Pass
4. Confirm the deactivation action.	N/A	The user should be deactivated, and their status should be updated in the system to "Deactivated."	As expected	Pass
Post Condition: User is deactivated, and their status is updated.				

Test Case 17: Password Criteria Validation

Project Name: Pet Shop Management System			Test Designed by: Ashik	
Test Case ID: PSMS_17			Test Designed date: 10-Jan-25	
Test Priority (Low, Medium, High): High			Test Executed by: Joy	
Module Name: Registration/Password Reset			Test Execution date: 11-Jan-25	
Test Title: Ensure password meets criteria during registration or password reset				
Description: Verify that the system enforces password criteria during user registration or password reset.				
Precondition (If any): User accesses the password field during registration or password reset.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Enter a password without uppercase characters and submit.	Password: "password"	System should display an error message indicating the password must include at least one uppercase character.	As expected	Pass
2. Enter a password without numbers or special characters and submit.	Password: "Password"	System should display an error message indicating the password must include numbers or special characters.	As expected	Pass
3. Enter a password less than 6 characters or more than 20 characters and submit.	Password: "Pwd"	System should display an error message indicating the password length must be between 6 and 20 characters.	As expected	Pass
Post Condition: Password validation mechanism is confirmed to be working correctly.				

Test Case 18: View Employee Information

Project Name: Pet Shop Management System			Test Designed by: Ashik	
Test Case ID: PSMS_18			Test Designed date: 10-Jan-25	
Test Priority (Low, Medium, High): High			Test Executed by: Joy	
Module Name: User Management			Test Execution date: 11-Jan-25	
Test Title: Verify HR can view employee details				
Description: Confirm that HR can successfully view employee details such as name, username, designation, and salary.				
Precondition (If any): Employee data exists in the system.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Log in as HR.	Username: HR123	The system should authenticate the HR user.	As expected	Pass
2. Navigate to "User Management > Employee Assign."	N/A	The "Employee Assign" section should load correctly.	As expected	Pass
3. Search for an employee by name.	Employee Name: John Doe	Employee details should appear in the search results	As expected	Pass
4. Verify that the employee's details are displayed.	N/A	Name, username, designation, salary, etc., are displayed.	As expected	Pass
Post Condition: HR successfully views employee details.				

Test Case 19: Add New Employee

Project Name: Pet Shop Management System			Test Designed by: Ashik	
Test Case ID: PSMS_19			Test Designed date: 10-Jan-25	
Test Priority (Low, Medium, High): High			Test Executed by: Joy	
Module Name: User Management			Test Execution date: 11-Jan-25	
Test Title: Verify HR can add a new employee				
Description: Ensure that HR can add new employees to the system.				
Precondition (If any): HR is logged in to the system.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Navigate to "User Management > Employee Assign."	N/A	The "Employee Assign" section should load correctly.	As expected	Pass
2. Click "Add New Employee."	N/A	The "Add New Employee" form should appear.	As expected	Pass
3. Fill in employee details (name, designation, salary).	Name: Jane Smith, Designation: Software Engineer, Salary: $75,000	Details are accepted by the system.	As expected	Pass
4. Click "Save."	N/A	The system adds the employee and displays a success message.	As expected	Pass
Post Condition: New employee is successfully added to the system.				

Test Case 20: Update Employee Details

Project Name: Pet Shop Management System			Test Designed by: Ashik	
Test Case ID: PSMS_20			Test Designed date: 10-Jan-25	
Test Priority (Low, Medium, High): Medium			Test Executed by: Joy	
Module Name: User Management			Test Execution date: 11-Jan-25	
Test Title: Verify HR can update existing employee information				
Description: Ensure HR can update the information of an existing employee in the system.				
Precondition (If any): Employee data exists in the system.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Search for an employee in "User Management > Employee Assign."	Employee Name: Mark Johnson	The employee's record should appear.	As expected	Pass
2. Click "Edit" next to the employee's record.	N/A	The "Edit Employee Details" form should appear.	As expected	Pass
3. Update the required details (designation, salary).	Updated Designation: Senior Manager, Updated Salary: $90,000	The updated details are accepted by the system.	As expected	Pass
4. Click "Save" to confirm the changes.	N/A	Changes are saved, and the updated details are displayed.	As expected	Pass
Post Condition: Employee details are updated in the system.				

Test-21: User Management Module

Project Name: Pet Shop Management System	Test Designed by: Aritra
Test Case ID: PSMS_21	Test Designed date: 11-01-2025
Test Priority (Low, Medium, High): Medium	Test Executed by: Shamim
Module Name: User Management	Test Execution date: 13-01-2025
Test Title: Validate document submission status tracking	
Description: Test the functionality of tracking the document submission status for employees.	

Precondition (If any): Employee data with required document statuses exists in the system.

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Login as Super Admin	Super Admin credentials	Successful login	As expected	Pass
2. Navigate to "User Management > Employee Status"	N/A	Employee Status page opens	As expected	Pass
3. Check the "Required Documents" column for an employee	Employee details	The status (Submitted/Not Submitted) is displayed accurately	As expected	Pass

Post Condition: The document submission status for the employee is correctly displayed, and no discrepancies are found.

Test-22: Dashboard Module

Project Name: Pet Shop Management System			Test Designed by: Aritra	
Test Case ID: PSMS_22			Test Designed date: 11-01-2025	
Test Priority (Low, Medium, High): High			Test Executed by: Shamim	
Module Name: Dashboard			Test Execution date: 13-01-2025	
Test Title: verify Super Admin can view overall statistics.				
Description: Test the dashboard display for employee, customer, and appointment statistics.				
Precondition (If any): Data exists in the system.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Login as Super Admin	Super Admin credentials	Successful login	As expected	Pass
2. Navigate to the dashboard	N/A	Dashboard is displayed	As expected	Pass
3. Check statistics	Employee, customer, appointment data	Accurate statistics are shown	As expected	Pass
Post Condition: Super Admin sees correct statistics and no errors on the dashboard.				

Test-23: Home Page Management

Project Name: Pet Shop Management System			Test Designed by: Aritra	
Test Case ID: PSMS_23			Test Designed date: 11-01-2025	
Test Priority (Low, Medium, High): Medium			Test Executed by: Shamim	
Module Name: Home Page Management			Test Execution date: 13-01-2025	
Test Title: Validate the ability to activate or deactivate homepage content.				
Description: Test the homepage content status update functionality.				
Precondition (If any): Homepage content exists				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Login as Super Admin	Super Admin credentials	Successful login	As expected	Pass
2. Navigate to Home Page Management	N/A	Management module opens	As expected	Pass
3. Active or Deactivate content	Homepage section or title	Content status updates successfully	As expected	Pass
Post Condition: Content status is saved in the system and reflects on the website.				

Test-24: Groomer Schedule Module

Project Name: Pet Shop Management System	Test Designed by: Aritra
Test Case ID: PSMS_24	Test Designed date: 11-01-2025
Test Priority (Low, Medium, High): High	Test Executed by: Shamim
Module Name: Groomer Schedule	Test Execution date: 14-01-2025
Test Title: Validate Groomer can view their grooming appointments.	
Description: Test the ability of Groomers to access their schedules.	
Precondition (If any): Test the ability of Groomers to access their schedules.	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Login as Groomer	Groomer credentials	Successful login	As expected	Pass
2. Navigate to Dashboard	N/A	Dashboard loads	As expected	Pass
3. View Appointments	Scheduled appointments	All appointments are displayed correctly	As expected	Pass

Post Condition: Groomer has access to a complete and accurate schedule.

Test-25: Search Functionality

Test Case ID: PSMS_25			Test Designed by: Aritra	
Test Priority (Low, Medium, High): Medium			Test Designed date: 11-01-2025	
Module Name: Product Search			Test Executed by: Shamim	
Test Title: Validate product search feature.			Test Execution date: 14-01-2025	
Description: Test the ability of Groomers to access their schedules.				
Precondition (If any): Ensure the search functionality returns relevant results based on the entered product name.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Enter a product name	Groomer credentials	Matching products are displayed in the search results	As expected	Pass
2. Click the "Search" button	N/A	Search results are loaded	As expected	Pass
Post Condition: Relevant products matching the search query are displayed in the search results.				

Test-26: Add to Cart Module

Test Case ID: PSMS_26			Test Designed by: Aritra	
Test Priority (Low, Medium, High): High			Test Designed date: 11-01-2025	
Module Name: Shopping Cart			Test Executed by: Shamim	
Test Title: Verify products can be added to the cart			Test Execution date: 14-01-2025	
Description: Ensure that selected products are added to the cart and displayed with accurate details.				
Precondition (If any): User is logged in.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Navigate to the product page	N/A	Product details are displayed	As expected	Pass
2. Click "Add to Cart" for a product	Product: "Cat Food"	Product is added to the cart	As expected	Pass
3. Check the cart	N/A	Product appears in the cart with correct details	As expected	Pass
Post Condition: The cart is updated with the selected product and displays its name, price, and quantity correctly.				

Test-27: Veterinary Schedule Module

Test Case ID: PSMS_27			Test Designed by: Aritra	
Test Priority (Low, Medium, High): High			Test Designed date: 11-01-2025	
Module Name: Veterinary Schedule			Test Executed by: Shamim	
Test Title: Validate Veterinary can view their pet care appointments.			Test Execution date: 14-01-2025	
Description: Test the ability of Veterinary staff to access their schedules.				
Precondition (If any): Test the ability of Veterinary staff to access their schedules.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Login as Veterinary	Veterinary credentials	Successful login	As expected	Pass
2. Navigate to Dashboard	N/A	Dashboard loads	As expected	Pass
3. View Appointments	Scheduled appointments	All appointments are displayed correctly	As expected	Pass
Post Condition: Veterinary staff has access to a complete and accurate schedule.				

8. ITEM PASS/FAIL CRITERIA

8.1 General Criteria

- **User Interface**: All interface elements are displayed correctly without visual misalignment or overlapping.
- **Functionality**: All functionalities such as login, registration, product search, and cart management must be operational and free from errors.
- **Responsiveness**: The interface must function correctly on all supported devices (desktop, tablet, mobile).
- **Data Accuracy**: All displayed information (e.g., product prices, descriptions, customer data) must be accurate and consistent.
- **Error Messages**: Clear and user-friendly error messages should be displayed for invalid input or system issues.

8.2 Specific Criteria

- **Login/Registration**:
  - The "Login" button must work as expected, redirecting to the correct user dashboard.
  - Password requirements (minimum length, special characters, etc.) must be enforced.
  - Registration must validate and store the correct format for email and phone numbers.
- **Product Management**:
  - Products should display accurate stock levels and pricing.
  - The “Add to Cart" button functionality must accurately reflect the product in the cart.
- **Grooming/Veterinary Appointments**:
  - Appointment slots must align with the employee availability schedule.
  - Confirmation emails or messages must be sent upon booking.
- **Inventory Management**:
  - The system should reflect real-time inventory updates post-sales.
  - Items out of stock should not be available for purchase.

- **Admin and Dashboard Features**:
    - Super Admin features must enable viewing and modifying customer and employee details.
    - HR and Receptionist access should be appropriately restricted to their roles.

8.3 Defect Severity Level

- **Critical (Fail)**:
    - Login/Register functionality not operational.
    - Payment gateway not working or miscalculating total amounts.
    - Appointments double-booked or mismatched with customer preferences.
- **Major (Fail)**:
    - User interface misalignment causing user confusion.
    - Incorrect stock updates leading to overselling.
    - Broken "Add to Cart" or checkout process.
- **Minor (Pass)**:
    - Typographical errors in product descriptions.
    - Aesthetic issues that do not impact functionality.
    - Delays in non-critical notifications like order confirmations.

9. TEST DELIVERABLES

- **Screen Prototypes:** Visual designs or mock-ups of the system's screens are created using design tools to showcase the layout, features, and functionality of the pet shop management system. These prototypes provide a clear reference for developers and stakeholders to ensure the system's user interface meets the required specifications.
- **Unit Test Plans and Result Documentation:** This includes a document outlining test cases for individual modules and their outcomes. Developers create and execute tests for each module, recording the results to confirm that every module works as expected before advancing to the next testing phase.
- **Integration Test Plan and Result Documentation:** This plan focuses on testing how different modules interact with each other and documenting the results. Modules are integrated and tested together to identify and address any issues in communication or data flow, ensuring that all components work seamlessly when combined.

- **System Test Plan and Load Results:** A comprehensive testing strategy is designed for the entire system, including performance testing under various load conditions. The system is evaluated for functionality, performance, and reliability to demonstrate that it can handle real-world usage scenarios effectively.
- **Defect Reports:** These are detailed records of bugs and issues identified during testing. Testers document defects with descriptions, severity levels, and steps to reproduce them. This process helps developers prioritize and address issues to improve the overall quality of the system.
- **Test Logs:** A complete record of all test cases executed, including dates, times, and outcomes, is maintained throughout the testing process. These logs, which can be generated automatically or manually, provide a comprehensive history of testing activities for tracking and review purposes.

10. STAFFING AND TRAINING NEEDS

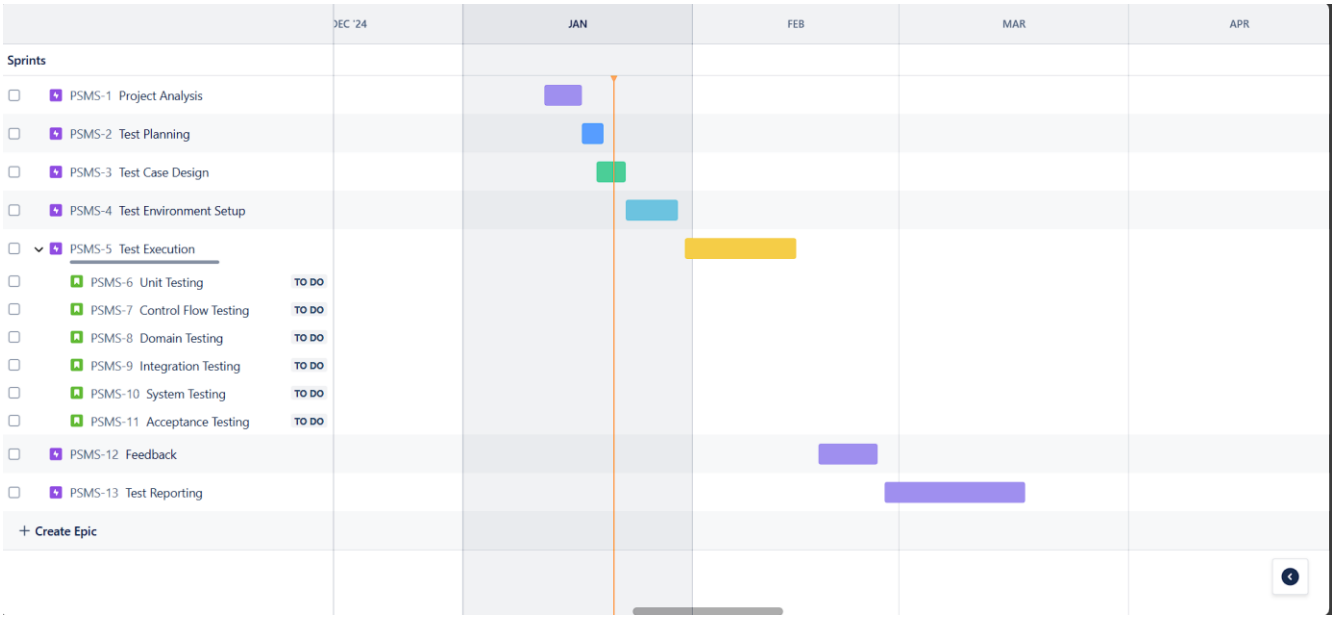
For the following project, it is preferred that there will be at least three (3) full time testers assigned to the project for the integration, system and acceptance testing phases of the project. A test project manager has to be hired at the beginning of the project to participate in the requirement phase of the system, system review etc. and approximately four months into the project they would be assigned full time.
To provide complete and proper testing the following areas need to be addressed in terms of training:

- The developers need to be familiar with unit testing, domain testing and control flow testing. They need to be aware of the basic documentation process of the testing details and expected results for the testers to properly test the system.
- The testers need to know how to use the testing tools (e.g: Selenium IDE, Apache Maven, BDD, TestNG, Allure). Testers need to be trained in this software for rapid testing and testing outcomes. Documentation must be performed in the manner that the client has requested. If no requirement has been provided, it must be performed in an industry standard way.
- Before delivering the product to the client, a selected number of the client's userbase must be trained on the basics of the web application. If this cannot be done, an explanation video should be made by the Project Manager or Testing Lead.

11. RESPONSIBILITIES

Task	TM	PM	Dev Team	Test Team	Client
Requirement Analysis and Documentation	✓	✓			✓
Acceptance Test Documentation & Execution		✓		✓	✓
System/Integration Test Documentation		✓	✓	✓	
Unit Test Documentation & Execution			✓	✓	
System Design Reviews	✓	✓	✓		
Detail Design Reviews	✓	✓	✓		
Test Procedures and Rules		✓		✓	
Screen & Report Prototype Reviews	✓	✓	✓		
Change Control and Regression Testing		✓		✓	✓

12. TESTING SCHEDULE



13. PLANNING RISKS AND CONTINGENCIES

Delayed Development-

Underestimating feature complexity, running into unforeseen technological difficulties, or depending on external software dependencies are just a few of the causes of development delays. Since the allotted time for testing cannot be extended, these delays frequently lead to a shortened testing timetable. As a result, the scope of testing may reduce even though the number of tests performed might not significantly decline. In the worst situation, important features can take precedence over others, which could lower the product's overall quality. Coordination and communication between developers and testers are crucial to ensuring appropriate test coverage and reducing the impact of such delays.

Contingency Measures:

- Give testing top priority for features that are vital to the web application's fundamental functionality.
- To properly assign resources and modify the test schedule, the project manager and the test team lead should work closely together.
- If required, narrow the testing's focus to high-risk regions while making sure all of the system's essential components are adequately examined.
- When feasible, use automated testing tools to boost productivity and speed up repetitive testing processes.

- Create an early-warning system to anticipate any delays and carry out backup plans well in advance.

Resource Unavailability-

The testing process can be seriously disrupted by the absence of important testing workers. Personal emergencies, illnesses, resignations, or other unanticipated events may cause such unavailability. When this happens, a knowledge gap may result from a lack of testers with experience in particular testing domains, making it challenging to carry out crucial tests. Proactive planning is necessary to avoid such a scenario, which includes keeping a reserve of backup resources and cross-training team members.

Contingency Measures:

- Keep a backup tester pool on hand in case the main resources aren't available.
- Set priorities for important testing tasks and direct resources toward the most in-demand regions.
- To reduce reliance on particular people, cross-train testers in other domains.
- When team members are not present, use thorough documentation of testing protocols and prior test cases to fill in knowledge gaps.
- To maintain continuity in the face of unforeseen circumstances, use flexible work arrangements, such as remote work possibilities.

14. APROVALS

Position	Name	Signature	Date
Lead Software Engineer	A.S.M Safatul Alam	Safatul	10.09.2026
Project Manager	Aritra Basak Joy	Aritra	10.09.2026
Lead Development Manager	MD. Shahriar Parvez Shamim	Shamim	10.09.2026
SQA Manager	Ashik Ibadullah	*Ashik*	10.09.2026
Lead SQA Engineer	Md Masum Biswas	Masum	10.09.2026
Project Sponsor	Shanzid Hasan	Shanzid	10.09.2026
Project Sponsor's Software Engineer	Kazi Al Kabid	**Kabid**	10.09.2026

Suggested by QA (Hiro Mia)

Features to be Tested

1. **User Management Modules**

1. **Log In Module:**
    - Verify user authentication (valid/invalid credentials).
    - Test role-based access (e.g., Admin, Customer, Employee, HR, Veterinary, Groomer, Receptionist).
    - Ensure the Login button works.
2. **Registration Module:**
    - Verify user registration with valid/invalid data.
    - Test email/phone number verification.
    - Ensure duplicate account prevention.
3. **User Access Management Module:**
    - Test role assignment and permissions for different users.
    - Verify access restrictions based on roles.
4. **User Deactivation:**
    - Test user deactivation process.
    - Verify restricted access after deactivation.

1. **Dashboard Modules**

1. **Dashboard Module:**
    - Validate dashboard data accuracy for different user roles.
    - Ensure proper navigation to linked modules.

2. **Employee Management Modules**

3. **View Employee Information:**
    - Test viewing employee details based on role/ID.
    - Ensure sensitive information is hidden from unauthorized users.
4. **Add New Employee:**
    - Validate the addition of employee records with correct/incorrect inputs.
    - Test duplicate record prevention.
5. **Update Employee Details:**
    - Verify updating employee details (e.g., role, contact information).

6. **Product and Inventory Management Modules**

1. **Product Search Module:**
    - Verify product search using filters (e.g., category, price range).
2. **Add to Cart Module:**
    - Test adding products to the cart.
    - Verify product quantity updates in the cart.
3. **Shopping Cart Module:**
    - Validate cart functionalities (update, remove items, view totals).
4. **Stock Quantity Check Module:**
    - Verify stock availability before adding to the cart.
5. **Products Management Module:**
    - Test adding, updating, and deleting products.
    - Verify product visibility on the customer interface.
6. **Inventory Management Module:**
    - Test real-time updates to inventory after sales or stock addition.

- Verify alerts for low stock levels.

7. Appointment Management Modules

1. **Appointment Management Module:**
    - Test viewing and managing appointments by Receptionist.
    - Verify appointment cancellations and rescheduling.
2. **Appointment Scheduling Module:**
    - Validate the scheduling of appointments with available slots.
    - Test appointment confirmation notifications.
3. **Groomer Scheduling Module:**
    - Test assigning grooming appointments to groomers.
    - Verify groomer availability and updates.
4. **Veterinary Scheduling Module:**
    - Test scheduling veterinary consultations.
    - Validate slot allocation for different veterinarians.

8. Order and Checkout Modules

1. **Order Checkout Module:**
    - Validate order placement process.
    - Verify order confirmation notifications.

9. Customer Support Module

1. **Customer Support Module:**
    - Test customer inquiries through the system.
    - Verify response tracking and escalation workflows.

10. Password Management Module

1. **Password Reset Module:**
    - Test the password recovery process (via email/phone).

11. Homepage and Search Functionality

1. **Homepage Management:**
    - Verify the display of homepage elements (banners, featured products).
    - Test responsiveness across devices.
2. **Search Functionality:**
    - Validate the accuracy of search results.
    - Test search functionality with invalid inputs.