A.1 Find me a pet system test documentation

A.1.1 Introduction

A.1.1.1 Scope

The system test documentation presented here is done in accordance with IEEE Std 829-1998.

The find me a pet system contains the following major functions:

a) Create a pet
b) Read a pet
c) Update a pet
d) Delete a pet

A.1.1.2 Assumptions

The following assumptions were made when preparing this test documentation:

a) The Find me a pet system will be system tested at only one site.

A.1.1.3 Naming conventions

The naming conventions that follow are used throughout the find me a pet system.

Find me a pet System
FP XX – YY ZZ
"FP" for Find Me A Pet System
XX for Item type
01 Project and Planning Documents
02 System Reference Manuals
03 Program Modules
04 Control Programs
05-20 Test Documentation
YY for Alphanumeric identifier within item type
ZZ Version Number (if applicable)

Project Planning Documents

FP01-01	Statement of Requirements

System Reference Manuals

FP02-01	System Reference Manual
FP02-02	User Transaction Reference Manual
FP02-03	Standard Development and Procedures

Test Documentation

FP03-YYZZ	Test Plan
FP04-YYZZ	Test Design Specification
FP05-YYZZ	Test Case Specification
FP06-YY	Test Procedure Specification
FP07-YY	Test Log
FP08-YY	Test Incident Report Log *
FP09-YY	Test Incident Report
FP10-YY	Test Summary Report

A.1.2

System Test Plan
for the
Find me a pet System

AP03-0101

Prepared by
FriendMe Team

August 22, 2021

System Test Plan—
Find me a Pet System

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1. Test plan identifier

AP03-0101

2. Introduction

2.1 Objectives. A system test plan for the Find me a pet system should support the following objectives:

1) To detail the activities required to prepare for and conduct the system test.
2) To communicate to all responsible parties the tasks that they are to perform and the schedule to be followed in performing the tasks.
3) To define the sources of the information used to prepare the plan.
4) To define the test tools and environmen1 needed to conduct the system test

2.2 Background. Last year the FriendMe a team developed Find me a pet system as a class project from Software Engineering 1 and 2.

GPA's president Mónica Santos approved the request for the Find me a Pet system in October 2020. In Software Engineering 1 the FriendMe team raise the system requirements interviewing the GPA's president Mónica and several volunteers of the group. The group finished a Statement of Requirements (AP01-01) in February 2021.

2.3 Scope. This test plan covers full systems test of the Find me a pet system. This includes user procedures, as well as programs and job control. In addition to external interfaces, security, recovery, and performance will also be evalua1ed.

3. Test items

All items that make up the Find me a pet system will be tested during the system test. The versions to be tested will be placed in the appropriate libraries by the configuration administrator. The administrator will also control changes to the versions under test and notify the test group when new versions are available.

The following documents will provide the basis for defining correct operation:
Find me a pet System Statement of Requirements (FP01-01)
Find me a pet System System Reference Manual (FP02-01)
Find me a pet System System Design Description (FP01-02)
Find me a pet System User Transaction Reference Manual (FP02-02)

3.1 User procedures. The on-line procedures specified in the Find Me a Pet System User TransactionReference Manual (FP02-02) will be tested.

4. Features to be tested

The following list describes the features that will be tested:

- Test design
  specification number Description

FP04-01	Create a pet
FP04-02	Read a pet
FP04-04	Delete a pet

4. Approach

FriendMe team will use the system documentation to prepare the design specification for all test cases, cases, and procedures. This approach will verify the accuracy and understanding of the information in the documentation in the areas covered by the test.

Personnel from FriendMe team will assist in developing the test designs and test cases. This will help ensure that the tests represent the production use of the system.

6.1 Job stream testing. A complete set of records of pets with their characteristics, edition, consultation and deletion of the same employees, where users with administration permission can only accept changes and deletion as well as the registration of pets.
6.2 Usability testing. We perform tests to ensure that the tasks are efficient, and the user can answer them effectively
6.3 Performance testing. Tests are carried out in real conditions to know if the product presented as such meets the customer's expectations and considers it to be a product.
6.4 Comprehensiveness. At least one test case will be tested on each of the system components
A coverage matrix will be used to related test design specifications to each of the areas described above.
6.5 Constraints. A final implementation date of August 22, 2021 has been planned for the Find me a pet system. It will be necessary to meet this date because the GPA begins full operation on October 1, and they must have the Find me a pet system for the pet's adoption and organize their work in the group.

5. Item pass/fail criteria

The system must satisfy the standard requirements for system pass/fail stated in the Find me a pet system Development Standards and procedures (FP02-03).

The system must also satisfy the following requirements.

- Memory requirements must not be greater than 4Gb of RAM

6. Test deliverables

The following documents will be generated by the FriendMe team and will be delivered to the GPA's president Mónica Santos after test completion.

Test documentation:
System Test Plan
System Test Design
Specifications System Test Case
Specifications System Test
Procedure Specifications System
Test Logs
System Test Incident Report
Log System Test Incident
Reports System Test
Summary Report

Test data:

(1) Copies of all data entry and inquiry screens and the reply screens are to be attached to the related testcase document.

(2) Copies of the input and output test files should be delivered to the GPA´s president Mónica Santos

7. Environmental needs

11.1 Hardware. The testing will be done on AMD Ryzen 7 3700U with Radeon Vega hardware configura1ion, 12 GB RAM, 2.30 GHz

11.2 Software

11.2.1 Operating system. The production operation system, Windows will be used to execute the tests.

11.3 Tools. The following tes1 tools are required to develop and evaluate the system tests:

(1) Test data generator (UT09-0200). This program will be used to generate the majority of the test data. It's located in the repository of backend.

11.4 Publications. The following documents are required to support systems testing:

- Find me a pet System Statement of Requirements (FP01-01)
- Find me a pet System System Reference Manual (FP02-01)
- Find me a pet System User Transaction Reference Manual (FP02-02)
- Find me a pet system Development Standards and procedures (FP02-03).

8. Staffing and training needs

13.1 Staffing. The following staff is needed to carry out this testing project.

13.1.1 Test group.

Test Manager	1
Senior Test Analysis	1
Test Analysis	1
Test Technician	1

9. Schedule

Hardware, sof1ware, and test tools will be used for testing during the period from July 14, 2021, through August 22, 2021.

10. Risks and contingencies

If the testing schedule is significantly impacted by system failure, the development manager has agreed toassign a full-1ime person 1o 1he 1es1 group 1o do debugging.

If hardware problems impact system availabili1y during the day, then the test group will schedule their activities during the evening.

The first production runs of the Find me a pet system must be checked out in detail before the public create an adoption form, and any checks in error must be corrected manually.

Module Test Documentation for Pets CRUD

- **Test Design Specification**
- **Test Case Specification**
- **Test Summary Report**

Prepared by FriendMe team
August 22, 2021

A2.2 Pets CRUD

Module test design specification

1. Test design specification identifier

NNE.TD.01.0522 August 2021

2. Features to be tested

1) Create a pet
2) Delete a pet
3) Get all pets from the database

All of these features are specified in the functional design description contained in the statement of requirements document FP01-01.

3. Approach refinements

The individual processing characteristics of the module will first be determined with valid and invalid input. Then all combinations will be used.

A program will be written for the module. A file will be created with each record containing several input values to create a pet and a single field with the resulting value. The controller program will read a register, pass the corresponding input values to the module, analyze the resulting values in the register and compare if they match to indicate that the test has passed.

Before the test begins, a test case file will be generated in the same format as the driver file. The records will contain the input values along with the resulting predicted values. After a test run, the driver file will be compared to the case file. The file comparison utility will report the differences.
Since generating all possible input values is not practical, the completeness of the test will be evaluated according to the following criteria:
Have each of the requirements been satisfied?
Have each of the input restrictions been tested (for example, the name of the pet cannot be an empty field)? Have all error messages been generated?
Have each branch been taken at least once?
Have each statement been executed at least once?

Test case selection rationale.

Input constraints for the creation of an animal:

(1) No field is entered that is not specified on the database model on FP01-01;

There are no relevant internal or output constraints

Common test-case characteristics.
All test cases require a module pets.

4. Test identification

Cases

Pet creation			
	Valid	Pet information specified on FP01-01 with admin authorization token	NNE.TC.001
	Invalid	Unauthorized for token	NNE.TC.010
		Token not found	NNE.TC.011
Pet Deletion			
	Valid	Pet id with admin authorization token	NNE.TC.020
	Invalid	Id was not found	NNE.TC.030
Get all pets from the database			
	Valid	Get requirement to pet route	NNE.TC.040
	Invalid		

Procedures. There are no *formal* test procedures associated with this design.

The procedure for using the module driver is in 1he *test tools* section of 1he programmer's guide.

5. Feature pass/fail criteria

Each feature must pass all of its test cases in order to pass this test.

A2.3 Pets CRUD

Module test case specification

1. Test case specification identifier

NNE.TC.121.01 22 August 2021

1. Test items

This routine creates 3 different requests to the server, GET, POST, DELETE in order to validate functionality on the pets' endpoints.

The requirements, functional design, and technical design specifications are contained in FP01-01 Statement of requirements document

2. Input specifications

Pet Creation
Get request on pet route with the pet information specified on FP01-01 on body and admin authorization token as bearer token for authorization

Pet deletion
Delete request on pet route with an id of the pet wanted to be deleted body and admin authorization token as bearer token for authorization

Get all pets from the database
Get request on pet route

3. Output specifications

Pet Creation
Status code 201
Response.body.id need to be a number

Pet deletion
Status code 204
Specified pet don't need to be find on the database.

Get all pets from the database
Status code 200
Response.body value need to be an array

4. Environmental needs

A module pets is required to execute this case.
Run the command npm run test to execute this test cases

A2.4 Pets CRUD

Module test summary report

1. Test summary report identifier

NNE.TS.01 22 August 2021

2. Summary

After correcting three faults, Pets crud on backend Module passed all tests.

The following test documents are associated with this module:

(1) Module Test Design Specifica1ion	NNE.TD.01.05
(2) Module Test Case Specifica1ions	NNE.TC.001 -.151

3. Variances

Conditions identified during testing resul1ed in enhancements to the set of invalid conditions described in the original functional design.

4. Summary of results

Authorization token first give us problems on the request. Additional logic was added, for admin login before all the test in order to save the admin token and the test set was rerun. All features passed their tests.

5. Evaluation

The module passed comprehensive testing with only three faults being detected.

6. Summary of activities

Begin Tes1ing 07/14/21	Estimate	Actual
Test Design (including cases)	5 days	7 days
Module Driver Development	7 days	14 days
Test Execution	2 days	0.5 days
Module Revision	2 days	2 days
Test Reporting	1 days	1 days
End Tes1ing 22/08/21	17 days	24.5 days

8. Approvals

Development Project Manager	Date