CMPE 492 Senior Project II

Plan My Day

Test Plan Report

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1. Introduction

This document describes approaches and methodologies that will apply to the unit, integration and system testing of Plan My Day application. It includes the objectives, test responsibilities, entry and exit criteria, scope, schedule major milestones, entry and exit criteria and approach. This document has clearly identified what the test deliverables will be, and what is deemed in and out of scope.

2. Scope

2.1 In Scope

- Register/Login
- UI functionality
- Sending Request/Managing Response
- Voice Recognition API
- Creating/Saving/Deleting/Loading Plans
- Google Map API
- Usage of NLTK
- Gensim/Glove Train

2.2 Out of Scope

- Performance Issues
- Security Issues
- User Acceptance

2.3 How testing will be performed

Tests will be divided into two parts; Client Side and Server-Side Tests.

Since we have a python server, we will be testing server-side part as unit testing in the Pycharm IDE firstly. After necessary fix operations are done we will test it within the running application.

Client Side tests, which includes UI functionality, Register/Login operations, Voice Recognition API, Google Map API, Creating and Deleting plans, will be done in Android Studio Emulator or any android device.

3. Test Environment and Testing Tools

Our tests will be held in Android Studio and Pycharm.

We will be using pycharm to observe how our python code would run on the server-side.

Process	Tool
Test case creation (Input Sentences)	Any Text Editor
Test case tracking	Pycharm and Android Studio
Test case execution	Pycharm and Android Studio

Table 1: General Test Process and Tools

We do not need any other tools and any external hardware except one computer.

3.1 Roles and Responsibilities

All the project members will work on the whole test process together.

4. Test Strategy

Primary (P) and secondary (S) responsibility for performing this testing.

TEST LEVEL	Project Team
Unit Testing	P
Integration Testing	P
Regression Testing	P
Subsystem Testing	P
Security Testing	S
Performance Testing	S
User Acceptance Testing	S

Table 2: Test Levels and Their Priorities

4.1 Unit Testing

We will be applying the unit test to these cases;

- Register/Login
  - We will simply try to register and login with a new account.
- Usage of NLTK
  - We will use the input test case sentences in our python server and observe the process.

4.2 Integration Testing

We will be applying the integration test to these cases;

- Voice Recognition API
  - We will test this on the client by speaking and observing if the speech to text process is working fine or not.
- Google Map API
  - We will put the locations that we catch from our server as a response into this API and will try to create a map for the user.
- Gensim/Glove Train
  - We will observe how the vectors are created and how the program can find the expected outcomes.

4.3 Regression Testing

Whenever we add new functionality to our program we will be applying the old tests to be sure that the new changes didn't affect the overall functionality or caused any bug or errors.

4.4 Subsystem Testing

After our Unit and Integration Testing is completed and the found bugs and problems are fixed, we will start to apply Subsystem Testing. Briefly, we will try to succeed the scenarios in one trace.

When all the tests above are done, we will test the system as a whole and if the required functionally is satisfied, we will start to make other tests which are marked with 'S' in Table 2 above.

5. Test Schedule

ID	Test Case	Start Date	End Date
1	Register/Login	05.02.2019	05.02.2019
2	UI Functionality	02.02.2019	04.02.2019
3	Usage of NLTK	01.04.2019	01.04.2019
4	Voice Recognition API	15.04.2019	16.04.2019
5	Sending Request to Python Server From the Android Client and Managing the Response	25.04.2019	-
6	Google Map API With the Response(Parsed Locations)	-	25.04.2019
7	Gensim/Glove Train	01.05.2019	05.05.2019
8	Testing the scenarios all in one breath / Running the whole system	05.05.2019	-
9	Secondary Tests (Section 4)	-	-

6. Risks

The following risks have been identified. The impact of the risk is based on how the project would be affected if the risk was triggered. The trigger is what milestone or event would cause the risk to become an issue to be dealt with.

Risk	Impact	Trigger
Cannot use/implement/integrate the technologies to the project to achieve the core objective of the project	Very High	Huge delays in the implementation on date
Speech to text API doesn't work properly	Low	The user has to edit the input manually
Python server cannot support a large number of requests	Medium	The user would have to wait for a while
Some parts/subsystems of the project delivery are not possible yet because of the developers	High	The product did not get delivered on schedule