Test Plan Document

SUBJECT: Software Testing

SUBMITTED TO: Najmun Nisa

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Test Plan Identifier

Test Plan CyberWatch V_1.0

Introduction

The purpose of writing this document is to setup SOPs to carry out testing for our project in a more effective and efficient manner when the time comes. It will help to list down all the tasks that are necessary for effective testing by pointing out the type of testing (be it **manual** or **automatic** testing) and the tools that we are going to need to finish our intended purpose.

The objective for document can be summarized as below:

- Pointing out the tools needed for testing
- Features to test and not to test
- Setting the deadlines for testing activities

Test Items

The items to be tested includes the both front and backend of the system, database connectivity, the response of system when no internet connection is available along with other artifacts. The items to be tested are as follow:

- Requirement Specification Document
- System Design Document
- Check code for any errors and warnings
- Check UI of the system if it has some inconsistencies
- Scope Document to check if the scope identified is real and not ambiguous

Features to Be Tested

Feature	Level
As a user, logging into the account via Google	Medium
As a user, connecting my Facebook and Twitter accounts	High
As a user, getting an email for 3 failed login attempts	High
Check the accuracy of sentiment analysis Model	High

Check the accuracy of Harassment Detection Model	High
As a user, should be able to change password	Medium
As a user, do not want to login to my Facebook and Twitter accounts regularly	High
Chatbot to interact when he/she is in poor state of mind	High
As a user, should be able to logout of the application	Low
Chatbot to recommend activities to the users depending on the mood and his activities	High

Features Not to Be Tested

The main feature not to be tested is User Settings as most of the features are to be accessed through website and will be tested accordingly.

Approach

The test will be conducted using Automatic testing approach by writing test scripts using different frameworks which best suits the component that we will be testing. Test will be conducted following the test cases as documented in JIRA. The status of the test cases will then be marked as PASS, FAIL or SKIP. In case of SKIPPING a particular test case, an explanation has to be given for why the test was not performed.

In case of testing Machine learning models which form the backbone for our project, the tests have to be carried out until unless the accuracy of the model is not more than equal to 85. For this purpose, tools like **PyCharm** and **Testim.io.**

After all the tests are carried out, a detailed report has to be submitted to supervisor and to be signed by him before concluding testing phase of our system.

All the testing and its required documentation has to be completed and signed by the Supervisor by the end of January.

Item Pass/ Fail criteria

The testing is considered as a success when 85% of all the tests falls in category of success along with achieving 85% or more accuracy for our Machine learning models. Moreover, no such defect is detected which causes the system to crash or stop working.

Suspension Criteria and Resumption Requirements

For checking and testing the Machine Learning Models, test and validate them till the accuracy of the model is not 85% or more. Once that target is achieved stop the testing process.

Stop the testing of all the test cases that require strong internet connection. Resume once strong internet connectivity is available.

Test Deliverables

The test deliverables for our project are as follow:
- Test cases and scenarios
- Requirement Specification Document
- Test Data
- Test Plan
- Quality Assurance Plan
- Test Summary Report
- Requirement Traceability Matrix

Test Tasks

Following test tasks needs to be performed:
- Providing list of Functional and Non-Functional Requirements to the testing team
- Preparation of test summary report
- Preparation of test cases to be performed

Environmental Needs

The environmental needs for testing the project are as follow:
- Android Versions 8-11
- IOS versions 10 and above
- Stable internet connection
- Testing to be continued till the minimum criteria for the suspension is reached as discussed in Suspension Criteria heading above

Responsibilities

The Test Manager (Supervisor in our case) is responsible for facilitating the testing project by providing the guidance and training they need. Each tester should understand the expectations on completion date and level of quality. The Test Manager should also communicate any risks to the team. The testing has the responsibility to strictly follow the time they are given.

Staffing and Training Needs

The project needs 3 trained software testers having prior experience of Mobile, Web and Python Testing with the higher priority given to someone who has experience of writing automation scripts to test ML models written in Python.

Schedule

All the testing has to be done by 1st week of January along with the submission of initial report to the respective supervisor, Two week window is kept open in order to deal with any delays or revision in testing plans before their submission to the client.

Risk and Contingencies

Following are some of the risks that we might face during testing phase:

- The testers hired may not be as skilled to carry out the task as though initially
- There may be change in the initial requirements. In this case, if the newly added requirement is already tested in any existing test case, then no new test case will be implemented.
- The initial testing report is not submitted on time which may have an impact on the quality of final report.
- The final testing report is not provided on time thus delaying the release of product in the market.

Approvals

Both project supervisor and co-supervisor must agree on completion of the testing project and determine when it's ready to proceed to the next step.