

**International School**

**Capstone Project 2**

CMU-SE 451

**Test Plan Document**

**Version 1.0 Date:19/02/2024**

**Intelligence IT Job Finding - The Recruitment System support with Chatbot**

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**Project Information**

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**Proposal Document**

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Test Plan v2.0 - SRS

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# Introduction

A test plan is a detailed software verification document that provides specifics on how the validate will test all aspects of software design. Test plans are test specifications used as guides for writing test case suites for design validation in both the software engineering fields. This test plan document contains a description of product functionality, a description of test cases to be written for each function, and a description of the testing platform to be used.

# Purpose

The purpose of the Test Plan is to define, schedule and monitor the test execution.

It supports the following objectives:

* + - Provide a high-level list of the major target test functions.
    - List the Requirements for Test.
    - Describe the testing strategies to be employed on each target test functions.
    - Identify the required resources and schedule the Test execution.

# Scope

This Test Plan is for release test plan for Smart Recruitment System.

The Test Plan defines the unit, integration and system testing approach. The test scopes

Includes the following:

* Testing of all functions
* Application performance
* Use cases requirements listed in the Product Backlog and User Stories document

# Out of scope

The following is considered out of scope for Smart Recruitment Test Plan and testing scope: Performance testing for Smart Recruitment System.

# Reference

**Table 1: Document references**

|  |  |
| --- | --- |
| **No** | **Document references** |
| 01 | Proposal document |
| 02 | Product Backlog document |
| 03 | Project Plan Document |

# Risk list Table 2: Risk list

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk** | **Mitigation Strategy** | **Responsibility** | **Contingency (Risk is realized)** |
| External Risks | Get fewer projects but will definitely succeed or have a high success rate | Not under control of the Project Team or Project  Steering Group | Do your part, recognize and eliminate risks as soon as possible |
| Project Management | Agree on all the standards before starting the project | Leader | It is mandatory to revise the whole project to the original standard if it is not correct |
| Tester | Sick, busy or crash cannot do it | Team tester | self-supplementing undo their assigned work, the way other members are supposed to support |
| Technology | Technology analysis before starting each project | Tester | Exchange learning in groups |
| Tester Skill | Train, or recruit experienced people | Tester, Team leader | Train technology professionals or invite professors to help with the project |

|  |  |  |  |
| --- | --- | --- | --- |
| Estimate Plan | Calculate carefully and accurately when taking requests and analyzing, apply good models and methods for estimation | Request Collectors, Request Analyst | Enlist the product delivery time or overtime for timely delivery |
| Automat ion Tool Risks | Choose the right tools and quality, check the tools before starting the  project | Tester, Team leader | Exchange in groups, change new tools and remove inconsistent tools |
| Out of system scope | Analyze and find solutions to test all testable areas | Tester |  |

1. **Target Test Areas**

Black box Testing

# Test Specification

* 1. **Features**

# Sprint 1

* TC101 – Chat with Chatbot on the web application [Admin]
  + Chat with Chatbot on the web application with Admin’s Role
* TC102 – Dashboard view [Admin]
  + Dashboard view of activity of Admin’s role
* TC103 – Interact with the chatbot to receive approriate suggestions.
  + Make questions for chatbot to support to answer questions.
* TC104 – Create RASA Chatbot Dashboard [Admin]
  + Dashboard view view of Chatbot’s activity of Admin Role
* TC105 – Intents management
  + Add, view, edit, or remove the intents.
* TC106 – Stories management
  + Add, view, edit, or remove the stories.
* TC107 – Rules management
  + Add, view, edit, or remove the rules.
* TC108 – Reponses management
  + Add, view, edit, or remove the reponses.

# Sprint 2

* TC201 – Job posting.
  + Posting the job on the system
* TC202 – Employer management
  + view, editing, or removing the selected employer profile.
* TC203 – Candidate management
  + Login to candidate account
* TC204 – Job application management
  + View, editing, or removing the selected Job application.
* TC205 – Job applying.
  + Applying job for the employers.
* TC206 – Message [Employer]
  + Message between Employers and Candidates
* TC207 – Message [Candidate]
  + Message between Employers and Candidates

# Sprint 3

* TC301 – Decorate Company
  + Add new images, banner, … for company’s page.
* TC302 – Comment Job
  + Evaluate and comment under the company’s post.
* TC303 – Forum
  + Add, view, edit and remove the post in the Forum Page
* TC304 – Category management
  + Adding, editing, or deleting job categories.
* TC305 – Test Quizz
  + Adding, editing, removing quizz.
* TC306 – Chat with Chatbot on the web application [Candidate]
  + Chat with Chatbot on the web application with Candidate’s Role

# Sprint 4

* TC401 – Employer registration
  + Register a new employer account
* TC402 – Dashboard view [Employer]
  + Dashboard with an overview of activity with Employer’s Role
* TC403 – Manage CV and Candidate [Employer]
  + View CV, Send notifications to candidates, Evaluate suitable CV
* TC404 – Interview schedule
  + View interview schedules
* TC405 – Evaluate Suitable CV
  + Get employer suggestions

# Test deliverables

* + - Test Plan Document
    - Test Case Document
    - Test Summary Report

# Requirements for test Test items

The following list describes the features that will be tested:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID**  **Function** | **Function** | **A part of** | **Priority** | **Type test**  **Case** | **Constraints** |
| TC101 | Chat with Chatbot on the web application with Admin’s Role | Chat with Chatbot on the web application [Admin] | 3 | User interface, Functionality | The system notifies "login successfully" |
| TC102 | Dashboard view of activity of Admin’s Role | Dashboard view [Admin] | 3 | User interface, Functionality | displayed on the dashboard page |
| TC103 | Make questions for chatbot to support to answer questions | Interact with the chatbot to receive approriate suggestions. | 2 | User interface, Functionality | displayed the Chatbot section. |
| TC104 | Dashboard view of Chatbot’s activity of Admin’ Role | Create RASA Chatbot Dashboard [Admin] | 2 | User interface, Functionality | displayed on the Chatbot’s dashboard page |
| TC105-01 | Adding Intents | Intents management | 2 | User interface, Functionality | The system notifies "Adding Intents successfully" |
| TC105-02 | Editing Intents | 2 | User interface, Functionality | The system notifies "Editing Intents successfully" |
| TC105-03 | Deleting Intents | 2 | User interface, Functionality | The system notifies "Deleting Intents  successfully" |
| TC105-04 | View Intents | 2 | User interface, Functionality | Displayed Intents Management Page |
| TC106-01 | Adding Rules | Rules management | 2 | User interface, Functionality | The system notifies "Adding Rule successfully" |
| TC106-02 | Editing Rules | 2 | User interface, Functionality | The system notifies "Editing Rule successfully" |
| TC106-03 | Deleting Rules | 2 | User interface, Functionality | The system notifies "Deleting Rule  successfully" |
| TC106-04 | View Rules | 2 | User interface, Functionality | Displayed Rules management Page |
| TC107-01 | Adding Stories | Stories management | 2 | User interface, Functionality | The system notifies "Adding Stories successfully" |
| TC107-02 | Editing Stories | 2 | User interface, Functionality | The system notifies "Editing Stories successfully" |
| TC107-03 | Deleting Stories | 2 | User interface, Functionality | The system notifies "Deleting Stories  successfully" |
| TC107-04 | View Stories | 2 | User interface, Functionality | Displayed Stories management Page |
| TC108-01 | Adding Reponses | Reponses management | 2 | User interface, Functionality | The system notifies "Adding Reponses successfully" |
| TC108-02 | Editing Reponses | 2 | User interface, Functionality | The system notifies "Editing Reponses successfully" |
| TC108-03 | Deleting Reponses | 2 | User interface, Functionality | The system notifies "Deleting Reponses  successfully" |
| TC108-04 | View Reponses | 2 | User interface, Functionality | Displayed Reponses management Page |
| TC201-01 | Create job postings | Job posting management | 3 | User interface, Functionality | The system notifies "Create successful " |
| TC201-02 | Edit job postings | 3 | User interface, Functionality | The system notifies "Edit successful " |
| TC201-03 | delete job postings | 3 | User interface, Functionality | The system notifies "Delete successfully " |
| TC202-01 | View the selected employer profile. | Employer management | 2 | User interface, Functionality | Displayed the employer profile page. |
| TC202-02 | Editing the selected employer profile. | 2 | User interface, Functionality | The system notifies "Editing successfully" |
| TC202-03 | Removing the selected employer profile. | Dashboard view | 2 | User interface, Functionality | The system notifies "Removing successfully" |
| TC203-01 | View the selected candidate profile. | Candidate management | 2 | User interface, Functionality | Displayed the candidate profile page. |
| TC203-02 | Editing the selected candidate profile. | 2 | User interface, Functionality | The system notifies "Editing successfully" |
| TC203-03 | Removing the selected candidate profile. | 2 | User interface, Functionality | The system notifies "Removing successfully" |
| TC204-01 | View the selected Job application | Job application management | 2 | User interface, Functionality | Displayed the Job application page. |
| TC204-02 | Editing the selected Job application | 2 | User interface, Functionality | The system notifies "Editing  successfully" |
| TC204-03 | Removing the selected Job application | 2 | User interface, Functionality | The system notifies "Removing successfully" |
| TC205 | Apply for a job | Job application | 3 | User interface, Functionality | Confirms the application submission. |
| TC206 | View schedule interviews with candidates | Interview scheduling | 2 | User interface, Functionality | displays schedule interviews with candidates |
| TC207 | Chat with candidates | Message [Employer] | 2 | User interface, Functionality | Display message in chat |
| TC208 | Chat with Employer | Message [Candidate] | 2 | User interface, Functionality | Display message in chat |

# Test strategy

**Understanding Requirements:**

* Requirement specifications will be sent by client.
* Understanding of requirements will be done by QA

# Preparing Test Cases:

* QA will be preparing test cases based on the exploratory testing. This will cover all scenarios for requirements.

# Preparing Test Matrix:

* QA will be preparing test matrix which maps test cases to respective requirement. This will ensure the coverage for requirements.

# Reviewing test cases and matrix:

* Peer review will be conducted for test cases and test matrix by QA Lead
* Any comments or suggestions on test cases and test coverage will be provided by reviewer respective Author of Test Case and Test Matrix
* Suggestions or improvements will be re-worked by author and will be send for approval
* Re-worked improvements will be reviewed and approved by reviewer

# Creating Test Data:

* Test data will be created by respective QA on client's developments/test site based on scenarios and Test cases.

# Executing Test Cases:

* Test cases will be executed by respective QA on client's development/test site based on designed scenarios, test cases and Test data.
* Test result (Actual Result, Pass/Fail) will updated in test case document Defect Logging and Reporting:
* QA will be logging the defect/bugs in Word document, found during execution of test cases. After this, QA will inform respective developer about the defect/bugs.

# Retesting and Regression Testing:

* Retesting for fixed bugs will be done by respective QA once it is resolved by respective developer and bug/defect status will be updated accordingly. In certain cases, regression testing will be done if required.

# Deployment/Delivery:

* Once all bugs/defect reported after complete testing is fixed and no other bugs are found, report will be deployed to client’s test site by PM.
* Once round of testing will be done by QA on client’s test site if required Report will be delivered along with sample output by email to respective lead and Report group.
* QA will be submitting the filled hard copy of delivery slip to respective developer.
* Once lead gets the hard copy of delivery slip filled by QA and developer, he will send the report delivery email to client.

# Testing types

**Black box testing:**

It is some time called behavioral testing or Partition testing. This kind of testing focuses on the functional requirements of the software. It enables one to derive sets of input conditions that that will fully exercise all functional requirements for a program.

# GUI Testing:

GUI testing will includes testing the UI part of report. It covers users Report format, look and feel, error messages, spelling mistakes, GUI guideline violations.

# Integration Testing:

Integration testing is systematic technique for constructing the program structure while conducting test to uncover errors associated with interacting. In Report, integration testing includes the testing Report from respective location(s).

# Functional Testing:

Functional testing is carried out in order to find out unexpected behavior of the report. The characteristic of functional testing are to provide correctness, reliability, testability and accuracy of the report output/data.

# System Testing:

System testing of software is testing conducted on a complete, integrated system to evaluate the system's compliance with its specified requirements. **Performance Testing:**

* Check the optimal time the page is loaded
* Check the operation of the system under

# Load user acceptance testing:

The purpose behind user acceptance testing is to conform that system is developed according to the specified user requirements and is ready for operational use. Acceptance testing is carried out at two levels - Alpha and Beta Testing. User acceptance testing (UAT) will be done at the Client.

# Alpha testing:

The alpha test is conducted at the developer's site by client.

# Hardware environment

* Computer Asus FX505DT

# Test schedule Human resources

|  |  |
| --- | --- |
| **Name** | **Role** |
| Khoa, Doan Ngoc Anh | Product owner, tester |
| Dat, Nguyen Thanh | Scrum master, tester |
| Thang, Nguyen Tran Anh | Member, Tester |

**Test Schedule**

|  |  |  |  |
| --- | --- | --- | --- |
| Sprint 1 | [Front End] Chat with Chatbot on the web application [Admin] | Tuan, Nguyen Anh  Dat, Nguyen Thanh  Duyet, Pham The  Tri, Le Minh | 21/03/2024 -  23/03/2024 |
| [Front End] Dashboard view [Admin] |
| [Front End] Interact with the chatbot to receive approriate suggestions |
| [Front End] Create RASA Chatbot Dashboard [Admin] |
| [Front End] Rules Management |
| [Front End] Stories Management |
| [Front End] Respones Management |
| [Front End] Intents Management |
| [Back End] Chat with Chatbot on the web application [Admin] |
| [Back End] Dashboard view [Admin] |
| [Back End] Interact with the chatbot to receive approriate suggestions |
| [Back End] Create RASA Chatbot Dashboard [Admin] |
| [Back End] Rules Management |
| [Back End] Stories Management |
| [Back End] Respones Management |
| [Back End] Intents Management |
| Sprint 2 | [Front End] for Job posting Page | Tuan, Nguyen Anh  Dat, Nguyen Thanh  Duyet, Pham The  Tri, Le Minh | 10/04/2024 -  12/04/2024 |
| [Front End] for Employer management |
| [Front End] for Candidate management |
| [Front End] for Job application management |
| [Front End] for Job Apply Page |
| [Front End] Message Page |
| [Back End] for Job posting Page |
| [Back End] for Employer management |
| [Back End] for Candidate management |
| [Back End] for Job application management |
| [Back End] for Job Apply Page |
| [Back End] Message Page |

# Test Cycle and Exit Criteria

* 1. **Entry criteria**
     + All test hardware platforms must have been successfully installed, configured, and functioning properly.
     + All the necessary documentation, design, and requirements information should be available that will allow testers to operate the system and judge the correct behavior.
     + Proper test case is available.
     + The test environment such as, lab, hardware, software, and system administration support should be ready.

# Exit criteria

* + - All test cases have been run.
    - A certain level of requirements coverage has been achieved.
    - No high priority or severe bugs are left outstanding.
    - All high-risk areas have been fully tested, with only minor residual risks left outstanding.
    - The schedule has been achieved.
    - Not over the allowed project budget