DUY TÂN UNIVERSITY

Capstone Project 2

CMU-SE 451

Test Plan Document

Version 1.0

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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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Document History

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1.0	15/02/2024	Initial Release

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1. 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.

1.1. 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.

1.2. 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 Storiesdocument

1.3. Out of scope

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

1.4. Reference

Table 1: Document references

No	Document references
01	Proposal document

02	Product Backlog document
03	Project Plan Document

1.5. 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	

2. Target Test Areas
Black box Testing

3. Test Specification
3.1. 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

3.2. Test deliverables
- Test Plan Document
- Test Case Document
- Test Summary Report

3.3. 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	Dashboardview 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		3	User interface, Functionality	The system notifies "Create successful "
TC201-02	Edit job postings	Job posting management	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 interviewswith candidates	Interview scheduling	2	User interface, Functionality	displays schedule interviewswith 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

3.4. 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		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	Tuan, Nguyen Anh	
	[Front End] Message Page	Dat, Nguyen Thanh	
	[Back End] for Job posting Page	Duyet, Pham The	
	[Back End] for Employer management	Tri, Le Minh	
	[Back End] for Candidate management		
	[Back End] for Job application management		
	[Back End] for Job Apply Page		
	[Back End] Message Page		

4. Test Cycle and Exit Criteria

4.1. 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.

4.2. 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