**Test Plan**

**Project name:** Techies Database

**Test Engineer:** Group 3

**Date:** 25-10-2023

**Prepared by:** Group 3

**Reviewed by:** Saba Rauf Shaikh

1. **Test Objective:**

* The objective of the test to check the functionality of **“Login, Add Employees, View Employees, Update Employees, Remove Employees and Logout”** as per given specifications or the requirements.
* We will ensure that our users are accessible of our builds in an easy way so that they can use all the modules without any difficulties.
* Final product of the specifications:
* Production ready software.
* A set of stable test scripts that can be re-used for the Functional and User Acceptance Testing (UAT).

1. **Scope of Testing:**

|  |  |  |
| --- | --- | --- |
| **Module Name** | **Applicable Roles** | **Description** |
| Login | Admin | Admin can login with their respective id and password. |
| Add Employees | Admin | Admin can add the employee details with the help of Add module. |
| View Employees | Admin | View employee module is available to view employees details by admin. |
| Update Employees | Admin | Admin can update employee details by this module. |
| Remove Employees | Admin | This module is used to remove employee details. |
| Logout | Admin | Admin can logout by clicking on logout button. |

1. **Within Scope:**

* Functional Testing.

1. **Out of Scope:**

* Non-Functional Testing like Stress and performance.
* Automation Testing.
* Cross browser Testing.

1. **Test Strategy:**
2. **Level of Testing:**

* **System Testing:**

In this type of testing we ensure that all the features of the software are working correctly when they put together.  
So, in this testing we ensure whether the given functions like **“Login, Add Employees, View Employees, Update Employees, Remove Employees and Logout”** are working as per the requirement when they all are tested at the same time.

* **User Acceptance Testing:**

It is a final phase of testing before the software is ready for the actual use. During UAT, the customers try out the whole software to ensure that the software is meeting the requirement or needs.  
In this testing we will check whether each and every user able to access the following module which is given without any defect or bug.

* **Integration Testing:**

It is a type of software testing where components of the software are gradually integrated and then tested as a unified group.  
In this testing we will check whether the all the components of software are working as expected when all are modules integrated together.

1. **Types of Testing:**

* **Black-box Testing:**

It is a type of software testing where the testers examine the functionality of the software without understanding the internal structure of the code.  
In this testing we check whether the given module which is given by the client is working as per the requirement.

* **Regression Testing:**

It is a type of testing that is performed to ensure that changes made to software, do not affect existing functionality of that software/application.  
In this testing we ensure that the software has any defects or bugs in any part of the build.

* **Exploratory Testing:**

In this technique of testing we test the application by exploring it in a manner to understand or check the flow of application.  
In this testing, we check the given modules are functioned as per the requirement and exact interfaces and functions with all the possibilities.

* **Smoke Testing:**In this technique, we test the basic and critical features of the application before going for one round of regression testing.In this testing, we also ensure that all the modules working as per the requirement by doing the positive testing or using valid credentials.
* **Sanity Testing:**

As per the result of smoke testing, if our build stable then we do sanity testing. It is performed to ensure that all defects have gone no more issues will come at the time of modifications.  
In this testing, we check whether our build is free from all the bugs and defects so it cannot raise any issue at the time of modification.

1. **Test Design Technique:**

* **Boundary Value Analysis (BVA):**

In this technique, we are going to check the boundary values of the given maximum and minimum values.  
**(Minimum - 1) (Minimum + 1) and (Maximum + 1) (Maximum - 1).**

* **Equivalence Class Partitioning (ECP):**

In this technique, we are going to partition the data into various classes we can select according to class and then tests according to the requirement.  
It reduces the number of test case and saves for further testing.

* **State Transition Technique:**

This technique focuses on the transitions between the different states of the system. Test cases are designed to cover various state changes including valid or invalid transitions.

1. **Configuration Management Tool:**

* **GIT (Global Information Tracker):**

GIT is a distributed management version control system that helps testing teams to collaborate, track changes, and maintain a history of changes.

1. **Terminology:**

* Login Module
* Add Employees
* View Employees
* Update Employees
* Remove Employees
* Search by Empid
* Print data
* Test Plan
* Test Case
* Test Scenario
* Defect Log
* RTM

1. **Area Planned for Automation:**

* Since automation testing beyond the scope, we haven’t planned any area for the automation testing.

1. **List of Automation Tools:**

* As we mention the automation testing is beyond of scope, no automation tools are needed for testing.

1. **Entry and Exit Criteria:**
2. **Entry Criteria:**

* The entry criteria are needed to be done after the code implements is performed.
* Requirement are defined and approved.
* Test data should be prepared and available.
* Test environment should be ready.

1. **Exit Criteria:**

* 98% test scripts are executed.
* Pass rate is equal to 95%.
* No critical defects are left.
* 95% of medium severity defects are closed.
* Remaining bugs were fixed.

1. **Test Deliverables:**

|  |  |  |
| --- | --- | --- |
| **Before Testing** | **During Testing** | **After Testing** |
| Test plan document | Test management table | Test results and reports |
| Test case document | Test data | Defects reports |
| Test design document | RTM |  |
| Requirement document |  |  |
| Installation guidelines |  |  |

1. **Roles and Responsibility:**

|  |  |
| --- | --- |
| **Roles** | **Responsibilities** |
| **Project Engineer** | * Manages the whole project. * Defines the project directions. * Risk management. |
| **Test Engineer** | * Writes the test cases. * Execute the test cases. * Reports the defects. |
| **Test Lead** | * Assigning the task to each member of the team * Overseeing the creation of the test cases whether its cover all the relevant scenarios. |
| **Senior QA** | * Taking in-charge of quality assurance. * Confirms whether the testing process is meeting the specified requirement or not. |
| **Configuration manager** | * Preparation of complete configuration documentation. * Plan and execute configuration management throughout the lifecycle of the project. |

1. **Risk and Mitigation:**

* Customer will ensure a full set of suitable and proctored test data is available.
* Customer will endeavor to meet the prerequisites indicated by.
* Tester will indicate what is requires and he will verify suitability of test data.
* Meet outstanding prerequisites.
* Redefine data.
* Review the test plan and modify the components.
* Restore the data and restart.

1. **Schedule:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Task** | **Members** | **Estimate effort** | **Start Date** | **End Date** |
| Create the test Specifications. | Test designer | 120 man-hour | 03-11-2023 | 18-11-2023 |
| Perform test specifications | Tester and test administrator | 60 man-hour | 19-11-2023 | 30-11-2023 |
| Test report | Tester | 10 man-hour | 30-11-2023 | 04-12-2023 |
| Test delivery | Test administrator | 15 man-hour | 05-12-2023 | 20-12-2023 |
| Total |  | 205 man-hour | 03-11-2023 | 20-12-2023 |

1. **Hiring and Training:**

* Minimum 2 year of experience in manual testing.
* Database knowledge.
* One month of training should be given under the domain and application.

1. **Test Environment:**

|  |  |  |
| --- | --- | --- |
| **No.** | **Resources** | **Descriptions** |
| 1 | Server | Needs a database server. |
| 2 | Test tool | Develop a test tool which can auto generate the test result to predefined form. |
| 3 | Network | Setup an LAN gigabit and 3 internet lines with speed at least 10 Mb/sec. |
| 4 | Computer | At least 4 computers runs on windows 10, RAM 4GB, CPU 3.66 GHz. |
| 5 | MS tools | Test case preparation, test case execution, defect management, test reporting and check the list of tests. |

1. **Assumptions:**

* Exploratory testing should be carried out once the build is ready for testing.
* Test case design activities will be performed by QA group.
* Performance testing is not considered in this,
* Test environment and preparation activities will be owned by development team.

1. **Approval Information:**

* **Test Manager:** Reviews the content of test plan, strategy, and test estimates sign off it.
* **Test Lead:** Reviews the test cases, test conditions, test data and test report.
* **Name:** Saba Rauf Shaikh
* **Role:** Project Manager
* **Date:** 01-11-2023

1. **Test Metrics:**

* Passed test case percentage: **(no. of passed test cases/no. of test cases executed) \*100.**
* Failed test case percentage: **(no. of failed test cases/no. of test cases executed) \*100.**
* Fixed defect Percentage: **(defect fixed/defects reported) \*100.**
* Accepted defect percentage: **(defects accepted as valid/total defects reported) \*100.**
* Defects differed percentage: **(defects differed for future release/total defects reported) \*100.**
* Critical defects percentage: **(critical defects/total defects) \*100.**