### Test Case Document For Job Portal (MERN Stack)

### 1. Introduction

### The Job Portal Is A MERN Stack-Based Web Application Designed To Connect Recruiters And Applicants. It Provides Recruiters With The Ability To Post Job Openings, Review Applications, And Communicate With Potential Candidates. On The Other Hand, Applicants Can Search For Jobs, Apply, Track Their Applications, And Receive Notifications Regarding Job Updates And Interview Schedules.

### This Document Outlines Comprehensive Test Cases To Ensure That All Functionalities Work As Expected. Testing Covers Authentication, Recruiter And Applicant Workflows, Notification Systems, Boundary Value Analysis, Equivalence Partitioning, And Path Testing.

### 2. Scope

### The Test Cases Included In This Document Cover The Following Functionalities:

### User Authentication, Including Registration, Login, And Password Recovery

### Recruiter Functionalities Such As Job Posting, Editing, And Applicant Management

### Applicant Functionalities Including Job Search, Application Submission, And Profile Management

### Notification System Covering Job Status Updates, Interview Scheduling, And Error Handling

### Error Handling To Ensure A Smooth User Experience

### Edge Cases And Invalid Input Scenarios To Test System Robustness

### 3.1 User Authentication

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Case ID | Description | Steps | Expected Result | Pass/Fail |
| TC\_01 | User Registration - Valid | Enter correct details and submit | Account should be created successfully | Pass |
| TC\_02 | User Registration - Invalid Email | Enter invalid email format | Error message should appear | Pass |
| TC\_03 | User Registration - Weak Password | Enter weak password | Error message should appear | Pass |
| TC\_04 | Duplicate Email Registration | Use an already registered email | Error message should appear | Pass |
| TC\_05 | Login - Valid Credentials | Enter correct email/password | User should be logged in | Pass |
| TC\_06 | Login - Wrong Password | Enter wrong password | Error message should appear | Pass |
| TC\_07 | Login - Unregistered Email | Enter an unregistered email | Error message should appear | Pass |
| TC\_08 | Password Reset - Valid | Request reset and enter new password | Password should be updated | Pass |
| TC\_09 | Password Reset - Expired Link | Use an old reset link | Error message should appear | Pass |
| TC\_10 | Session Timeout | Stay inactive for a long time | User should be logged out automatically | Pass |

### 3.2 Recruiter Features

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Case ID | Description | Steps | Expected Result | Pass/Fail |
| TC\_11 | Post a Job - Valid | Fill correct details and submit | Job should be posted | Pass |
| TC\_12 | Post a Job - Missing Fields | Leave required fields empty | Error message should appear | Pass |
| TC\_13 | Edit Job - Valid | Modify job details and save | Changes should be reflected | Pass |
| TC\_14 | Edit Job - Invalid Input | Enter invalid characters in job title | Error message should appear | Pass |
| TC\_15 | Delete Job - Valid | Click delete on a job | Job should be removed | Pass |
| TC\_16 | Delete Job - Already Deleted | Try deleting an already removed job | Error message should appear | Pass |
| TC\_17 | View Applicants - Valid | Open job post | Applicants should be visible | Pass |
| TC\_18 | Approve Applicant - Valid | Approve an applicant | Status should update | Pass |
| TC\_19 | Approve Applicant - Invalid | Try approving without selecting an applicant | Error message should appear | Pass |
| TC\_20 | Schedule Interview | Schedule an interview | Applicant should receive notification | Pass |

### 3.3 Applicant Features

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Case ID | Description | Steps | Expected Result | Pass/Fail |
| TC\_21 | Search Jobs - Valid | Enter correct keywords | Relevant jobs should appear | Pass |
| TC\_22 | Search Jobs - No Results | Search for non-existent job | No jobs should appear | Pass |
| TC\_23 | Apply for Job - Valid | Click apply on job | Application should be submitted | Pass |
| TC\_24 | Apply for Job - Without Resume | Apply without uploading resume | Error message should appear | Pass |
| TC\_25 | Withdraw Application | Click withdraw on application | Application should be removed | Pass |
| TC\_26 | Update Profile - Valid | Modify profile and save | Updated details should be reflected | Pass |
| TC\_27 | Update Profile - Invalid Email | Enter incorrect email format | Error message should appear | Pass |
| TC\_28 | Save Job | Click save on a job post | Job should be added to saved jobs | Pass |
| TC\_29 | Delete Saved Job | Remove saved job | Job should be removed | Pass |
| TC\_30 | Dashboard View | Login as applicant | Dashboard should display applied and saved jobs | Pass |

### 3.4 Notifications

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Case ID | Description | Steps | Expected Result | Pass/Fail |
| TC\_31 | Applicant Job Updates | Recruiter updates job status | Applicant should get a notification | Pass |
| TC\_32 | Recruiter Receives Applications | Applicant applies for job | Recruiter should get notified | Pass |
| TC\_33 | Job Expiry Alert | Job post expires | Recruiter should get notified | Pass |
| TC\_34 | Unread Notification Indicator | Receive multiple notifications | Unread count should be displayed | Pass |
| TC\_35 | Mark Notification as Read | Click notification | Notification should be marked read | Pass |
| TC\_36 | Push Notification - Enabled | Enable push notifications | Notifications should be received | Pass |
| TC\_37 | Push Notification - Disabled | Disable push notifications | No notifications should be received | Pass |
| TC\_38 | Email Alerts | Enable email notifications | Emails should be received | Pass |
| TC\_39 | Invalid Notification Action | Click on a deleted job notification | Error message should appear | Pass |
| TC\_40 | System Error Notification | Trigger system error | User should receive error message | Pass |

### 3.5 Boundary Value Analysis (BVA)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Steps** | **Expected Result** | **Pass/Fail** |
| BVA\_01 | Password Length - Min Boundary | Enter a 6-character password | Accepted | Pass |
| BVA\_02 | Password Length - Below Min | Enter a 5-character password | Error message | Pass |
| BVA\_03 | Password Length - Max Boundary | Enter a 20-character password | Accepted | Pass |
| BVA\_04 | Password Length - Above Max | Enter a 21-character password | Error message | Pass |
| BVA\_05 | Job Title Length - Min Boundary | Enter a 3-character job title | Accepted | Pass |
| BVA\_06 | Job Title Length - Below Min | Enter a 2-character job title | Error message | Pass |
| BVA\_07 | Job Title Length - Max Boundary | Enter a 100-character job title | Accepted | Pass |
| BVA\_08 | Job Title Length - Above Max | Enter a 101-character job title | Error message | Pass |

### 3.6 Equivalence Partitioning (EP)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Steps** | **Expected Result** | **Pass/Fail** |
| EP\_01 | Valid Email | Enter email: test@example.com | Accepted | Pass |
| EP\_02 | Invalid Email - Missing '@' | Enter email: testexample.com | Error message | Pass |
| EP\_03 | Invalid Email - Missing domain | Enter email: test@ | Error message | Pass |
| EP\_04 | Valid Salary Range | Enter salary: 50,000 | Accepted |  |
| EP\_05 | Invalid Salary - Negative | Enter salary: -10,000 | Error message | Pass |
| EP\_06 | Invalid Salary - Too High | Enter salary: 10,000,000 | Error message | Pass |
| EP\_07 | Valid Phone Number | Enter 10-digit phone number | Accepted | Pass |
| EP\_08 | Invalid Phone - Less than 10 digits | Enter 9-digit number | Error message | Pass |
| EP\_09 | Invalid Phone - More than 10 digits | Enter 11-digit number | Error message | Pass |

### 3.7 Path Testing

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Steps** | **Expected Result** | **Pass/Fail** |
| PT\_01 | Login Flow - Valid Path | Enter correct email & password, click login | User is logged in | Pass |
| PT\_02 | Login Flow - Invalid Password | Enter wrong password, click login | Error message | Pass |
| PT\_03 | Job Application Flow - Valid | Search job -> Apply -> Confirm | Application submitted | Pass |
| PT\_04 | Job Application Flow - Missing Resume | Search job -> Apply without resume | Error message | Pass |
| PT\_05 | Recruiter Job Posting Flow | Login -> Post Job -> Save | Job is posted | Pass |
| PT\_06 | Recruiter Rejects Applicant | Login -> View Applicants -> Reject | Applicant gets rejection | Pass |
| PT\_07 | Notification Flow | Receive new job alert -> Click on it | Job details open | Pass |
| PT\_08 | Session Timeout | Login -> Stay inactive -> Refresh | User is logged out | Pass |

## 4. Conclusion

This document provides a structured approach to testing the Job Portal to ensure all functionalities work as expected. Testing includes authentication, recruiter and applicant workflows, notifications, and various invalid input scenarios to ensure robustness and user experience.

Each test case has been designed to identify potential defects and enhance the overall reliability of the system. The test plan incorporates boundary value analysis, equivalence partitioning, and path testing, ensuring a robust evaluation of system performance and user interactions. Future updates may include performance testing and security audits to further enhance system integrity