

Lab Experiment : Online Voting System with OTP Verification

1. Introduction

This document presents a complete Software Testing Artifact (STA) set for the online voting system, which includes OTP verification for user authentication.

2. Requirements

1. The system shall allow user registration with a valid email address.
2. The system shall send an OTP to the user's email for verification.
3. The system shall allow login using a valid OTP.
4. The system shall allow a user to cast a vote once authenticated.
5. The system shall display a confirmation message after a successful vote.
6. The system should notify users if they have already voted.

2. Test Cases

TC_ID	Description	Steps	Expected Result
TC_01	Valid OTP Login	1. Enter registered email address.	OTP sent to registered email.
		2. Enter received OTP and click Submit.	User logged in successfully.
TC_02	Invalid OTP	1. Enter registered email address.	Error message: Invalid OTP.
		2. Enter incorrect OTP and click Submit.	Error message: OTP mismatch.

TC_ID	Description	Steps	Expected Result
TC_03	Blank Email	Leave email field blank and click Submit.	Error message: Email required.
TC_04	Blank OTP	Leave OTP field blank and click Submit.	Error message: OTP required.
TC_05	Vote After OTP Verification	1. Login with valid OTP.	User successfully logged in.
		2. Select a candidate and click Vote.	Confirmation message displayed.
TC_06	Duplicate Vote Attempt	1. Login with valid OTP.	Error message: You have already voted.

3. Requirement Traceability Matrix (RTM)

Requirement ID	Requirement Description	Test Case IDs
R1	User registration with valid email.	TC_01, TC_03
R2	OTP verification for login.	TC_01, TC_02
R3	Voting functionality.	TC_05, TC_06
R4	Prevent multiple votes.	TC_06

4. Test Plan Summary

- **Objective:** Validate the functionality of the online voting system with OTP verification.
- **Test Type:** Manual Functional Testing
- **Scope:** OTP verification and voting functionality.
- **Tools:** Chrome browser, email service for OTP.

- **Tester:** [Tester Name]
- **Schedule:** 2 days (Manual execution)

6. Bug Report (Sample)

Bug ID	Description	Steps to Reproduce	Severity	Status
BUG_01	OTP not sent to user	Register with email, click "Send OTP"	Medium	Open
BUG_02	Invalid OTP error not displayed	Enter invalid OTP and click Submit	High	Open

7. Test Evidence

Place screenshots or console logs here to support test case execution results.
Examples:

- Screenshot showing successful login with OTP (TC_01)
- Screenshot showing error message for invalid OTP (TC_02)
- Screenshot showing vote confirmation (TC_05)

8. Test Report

Test Case	Status	Comments
TC_01	Passed	OTP sent and user logged in
TC_02	Passed	Invalid OTP error displayed
TC_03	Passed	Email required error displayed
TC_04	Passed	OTP required error displayed
TC_05	Passed	Voting successful and confirmation shown

Test Case	Status	Comments
TC_06	Failed	Duplicate vote error not shown

Total Cases: 6

Passed: 5

Failed: 1

Blocked: 0

Summary: Functional coverage is satisfactory. One usability bug requires attention.

9. Conclusion

This document provides a comprehensive overview of the testing artifacts for the Online Voting System with OTP verification. It includes requirement analysis, test case writing, bug reporting, and traceability mapping. The system ensures secure and valid authentication through OTP, and the tests validate its core functionalities effectively.