

## **Appendix A: User Manuals**

### **A.1 Introduction**

This appendix has comprehensive user manuals for all three positions in the E-Vote system: Admin, Auditor, and Voter. Each of the manuals has step-by-step guidelines for moving around the user interface, performing role-specific operations, and troubleshooting common problems.

The E-Vote website is at: <https://e-vote-x.vercel.app>

### **A.2 Admin User Manual**

#### **A.2.1 Login and Authentication**

1. Accessing the System
  - a. Go to <https://e-vote-x.vercel.app>
  - b. Type in your admin password and username
  - c. If asked to provide biometric identification, comply with the on-screen prompts
2. Dashboard Overview
  - a. Once logged in successfully, you will be automatically routed to /admin
  - b. Its dashboard displays key metrics like:
    - i. Registered users total
    - ii. Biometric registration statistics
    - iii. Recent user additions
    - iv. Recent election creations
    - v. Active election status

### **A.2.2 User Administration**

1. Viewing Users
  - a. Access /admin/users through sidebar
  - b. It is shown as a table with the following columns:
    - i. Username
    - ii. Email
    - iii. Department
    - iv. Role
    - v. Biometric registration status
    - vi. Action buttons
2. Creating a New User
  - a. Select the “Add User” button at the top of the list of users
  - b. Complete all required fields in the form:
    - i. Username (should be unique)
    - ii. Email (must be valid format)
    - iii. Password (minimum 6 characters)
    - iv. Department (select from dropdown)
    - v. Role (Admin, Auditor, or Voter)
    - vi. Click “Create User” to save
3. Editing a User
  - a. Find the target user in the table
  - b. Click the edit (pencil) icon in the Actions column
  - c. Update the user information as needed
  - d. Click “Update User” to save updates

4. Deleting a User
  - a. Identify the target user from the table
  - b. Click on the delete (trash) icon within the Actions column
  - c. Confirm deletion in popup dialog

### **A.2.3 Electoral Management**

1. Viewing Elections
  - a. Go to /admin/elections via the sidebar
  - b. In a table containing the following columns for:
    - i. Election name
    - ii. Description
    - iii. Begin date/time
    - iv. End date/time
    - v. Department
    - vi. Status
    - vii. Action buttons
2. Creating a New Election
  - a. Click the “Create Election” button above the list of elections
  - b. Complete all required fields:
    - i. Election name
    - ii. Position
    - iii. Start date and time
    - iv. End date and time
    - v. Department
  - c. Click “Add Candidate” to input candidate details:

- i. Applicant name
    - ii. Candidate Picture
  - d. Repeat for more candidates
  - e. Select “Create Election” to save
3. Editing an Election
- a. Locate the election you want in the table
  - b. Click on the edit (pencil) icon in the Actions column
  - c. Modify the voting details as required
  - d. Click “Update Election” to refresh changes

#### **A.2.4 Profile Management**

1. Reviewing and Updating Profile
  - e. Navigate to /admin/profile through the sidebar
  - f. Review current profile information
  - g. Click “Edit Profile” to modify personal details
  - h. To change password, type current password and new password
  - i. Click “Update Profile” to save changes

### **A.3 Auditor User Manual**

#### **A.3.1 Login and Authentication**

1. Accessing the System
  - a. Navigate to <https://e-vote-x.vercel.app>
  - b. Enter your auditor login details (password and username)
  - c. If requested for biometric verification, follow on-screen instructions

2. Dashboard Overview
  - a. Logged in to /auditor by default upon a successful login
  - b. The monitoring metrics which include:
    - i. User statistics
    - ii. Active election status
    - iii. Recent system activities
    - iv. Voting participation rates

### **A.3.2 User Monitoring**

1. Viewing Users
  - a. Go to /auditor/users via the sidebar
  - b. View user list in read-only mode
  - c. Search and filtering capabilities for individual users

### **A.3.3 Election Monitoring**

1. Viewing Elections
  - a. Go to /auditor/elections through the sidebar
  - b. See the elections list in read-only form
  - c. Employ search and filtering functionality to identify specific elections
2. Monitoring Active Elections
  - a. Click on a live election to see current participation figures
  - b. Track voter turnout by department
  - c. Review timestamp voting activity logs
3. Confirming Election Results
  - a. Select a completed election to view results

- b. Check percentages and vote tallies
- c. Verify result calculations with raw vote data
- d. Verify audit logs for anomalies

#### **A.3.4 Profile Management**

- 1. Profile Viewing and Editing
  - a. Go to /auditor/profile from the sidebar
  - b. Review current profile information
  - c. Choose “Edit Profile” to update personal information
  - d. To reset the password, enter current password and new password
  - e. Click “Update Profile” to save changes

### **A.4 Voter User Manual**

#### **A.4.1 Login and Authentication**

- 1. Accessing the System
  - a. Navigate to <https://e-vote-x.vercel.app>
  - b. Enter your voting credentials (username and password)
  - c. If requested to present biometric verification, follow on-screen instructions
- 2. Dashboard Overview
  - a. Once logged in successfully, you are redirected to /user automatically
  - b. The dashboard shows:
    - i. Voting you can do
    - ii. Your vote history statistics
    - iii. Result of completed elections (if published)

## **A.4.2 Voting in Elections**

1. Viewing Available Elections
  - a. Go to /user/elections via the sidebar
  - b. Upcoming elections you can vote for are shown as cards
  - c. Every card displays:
    - i. Election name
    - ii. Description
    - iii. Begin and end dates
    - iv. Voting status
2. Casting a Vote
  - a. Choose an active election card
  - b. Review the list of candidates
  - c. Tap on the card of your preferred candidate
  - d. Confirm your selection and act accordingly as per the modal
  - e. Receive confirmation of your successful vote
3. Watching Election Results
  - a. Go to /user/elections via sidebar
  - b. Completed elections with published results are indicated as such

## **A.4.3 Vote History**

1. Viewing Your Voting History
  - a. Access /user/votes through the sidebar
  - b. Verify cards with all the elections you've voted in
  - c. Every card displays:

- i. Election name
- ii. Your chosen candidate
- iii. Election status (current/completed)
- iv. Results status (if election completed)

#### **A.4.4 Profile Management**

1. Viewing and Editing Profile
  - a. Go to /user/profile via the sidebar
  - b. Check recent profile data
  - c. Click “Edit Profile” to modify personal information
  - d. To change password, enter current password and new password
  - e. Click “Update Profile” to save changes

### **A.5 Troubleshooting Common Issues**

#### **A.5.1 Login Issues**

1. Biometric Verification Failures
  - a. Offer suitable lighting and positioning for biometric capture
  - b. If repeated failures occur, call system administrator

#### **A.5.2 System Access Issues**

1. Page Not Found Errors
  - a. Verify you’re on the correct URL
  - b. Check your internet connection
  - c. Clear browser cookies and cache

- d. If not corrected, contact technical support
2. Permission Denied Messages
  - a. Make sure you're logged in with the correct account
  - b. Ensure your delegated role has authority for the asked action
  - c. Contact an administrator if you believe you are entitled to

### **A.5.3 Voter Problems**

1. Can't See an Election
  - a. Verify the election is active (validate dates)
  - b. Check your department's qualification for the election
  - c. Reach out to an administrator if you believe you need access
2. Vote Not Confirmed
  - a. If you receive an error while voting, record the error code
  - b. Try refreshing the page and voting again
  - c. If the issue continues, contact technical support with the error code.

### **A.5.4 Contact Information**

For technical assistance or assistance concerning the E-Vote system, utilize:

- Email: support@mcs-nust.edu.pk
- Department of Computer Software Engineering, Military College of Signals, NUST