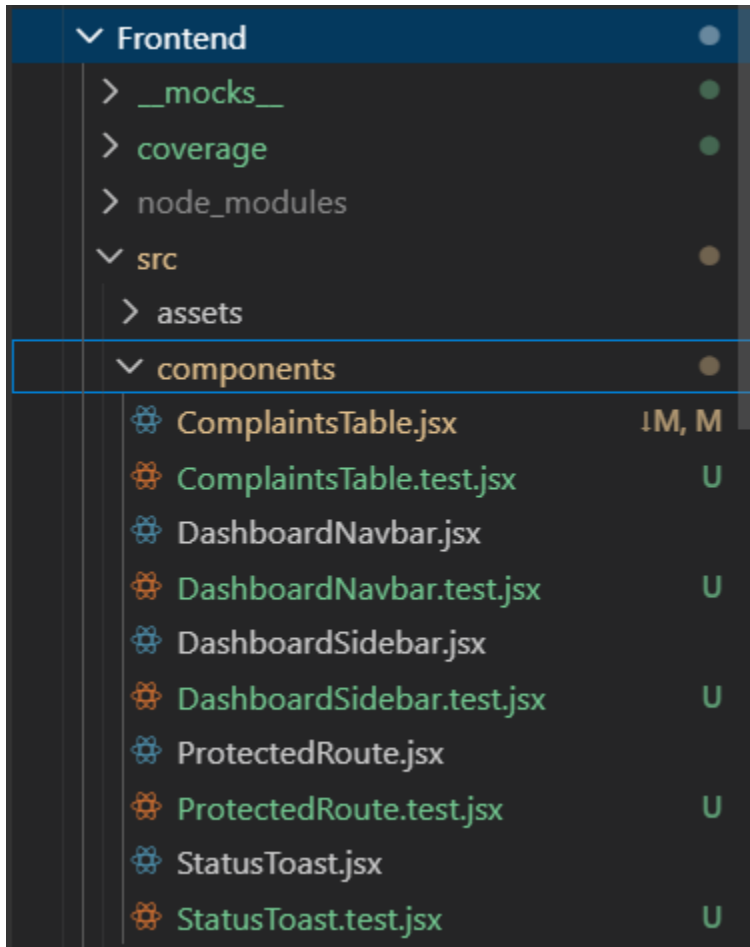


Unit Testing - Frontend

- Components:



1. ComplaintsTable.jsx

```
PASS src/components/ComplaintsTable.test.jsx
ComplaintsTable Component
  ✓ renders empty message when no complaints provided (default props) (166 ms)
  ✓ renders JSX empty message if provided (11 ms)
  ✓ renders valid Priority and Status badges with correct styles (71 ms)
  ✓ hides all optional columns (7 ms)
  ✓ renders 'committee-actions' correctly (Lines 206-228) (145 ms)
  ✓ renders 'admin-actions' but hides buttons if callbacks are missing (8 ms)
  ✓ renders 'view-only' but does not render link if viewLinkBase is missing (9 ms)
  ✓ renders default/unknown action type (returns null) (11 ms)
  ✓ renders 'view-delete' with specific deleting state (40 ms)
  ✓ renders upvote count using array length fallback (7 ms)
  ✓ renders 0 upvotes if data is completely missing (11 ms)
  ✓ formats complaint ID as CC + last 6 chars and header shows 'ID' when showPriority true (6 ms)
  ✓ renders human readable date when createdAt provided (not N/A) (10 ms)
  ✓ hides delete button when canDeleteComplaint returns false (13 ms)
  ✓ renders view link when viewLinkBase provided and link has correct href (24 ms)
  ✓ upvote button calls onUpvote and respects upvoting state and hasUpvoted styling (24 ms)
  ✓ admin-actions render both Update Status and View buttons and callbacks are called (28 ms)
  ✓ shows Anonymous badge when complaint.isAnonymous is true (9 ms)
  ✓ renders 'Unknown' when userId or userId.name is missing (10 ms)
  ✓ delete button triggers onDelete callback when complaint exists (19 ms)
  ✓ does not render actions column when showActions is false (5 ms)

Test Suites: 1 passed, 1 total
Tests: 21 passed, 21 total
Snapshots: 0 total
Time: 4.751 s
```

2. DashboardNavbar.jsx

```
PASS src/components/DashboardNavbar.test.jsx
DashboardNavbar Component
  ✓ renders title and profile information correctly (178 ms)
  ✓ does not render badge when unreadCount is 0 (15 ms)
  ✓ renders badge with correct count (72 ms)
  ✓ renders badge with limit indicator when count exceeds limit (14 ms)
  ✓ calls onBellClick when bell icon is clicked (30 ms)
  ✓ renders notification dropdown when open (13 ms)
  ✓ renders loading state in notifications (17 ms)
  ✓ renders empty state when no notifications (14 ms)
  ✓ renders list of notifications (57 ms)
  ✓ calls onNotificationClick when a notification is clicked (17 ms)
  ✓ calls onNotificationDelete when delete button is clicked (16 ms)
  ✓ renders 'Mark all as read' button only when unreadCount > 0 (21 ms)
  ✓ toggles profile dropdown on click (11 ms)
  ✓ renders profile menu items when dropdown is open (24 ms)
  ✓ calls onLogout when logout button is clicked (14 ms)
  ✓ closes dropdown when clicking Profile link (16 ms)
  ✓ does not render menu button when showMenuButton is false (6 ms)
  ✓ renders menu button and handles click (11 ms)

Test Suites: 1 passed, 1 total
Tests: 18 passed, 18 total
Snapshots: 0 total
Time: 4.482 s
```

3. DashboardSidebar.jsx

```
PASS src/components/DashboardSidebar.test.jsx
DashboardSidebar Component
  ✓ renders logo details correctly (169 ms)
  ✓ renders navigation items (26 ms)
  ✓ renders footer content when provided (14 ms)
  ✓ renders logoMark with correct initials and styling (9 ms)
  ✓ navigates to logoRoute when logo is clicked (29 ms)
  ✓ applies active styling to current route (16 ms)
  ✓ hides sidebar visually on mobile when isOpen is false (90 ms)
  ✓ shows sidebar visually on mobile when isOpen is true (15 ms)
  ✓ renders overlay only when open (23 ms)
  ✓ calls onClose when overlay is clicked (12 ms)
  ✓ closes sidebar when nav item clicked on MOBILE (< 1024px) (14 ms)
  ✓ does NOT close sidebar when nav item clicked on DESKTOP (>= 1024px) (13 ms)

Test Suites: 1 passed, 1 total
Tests:       12 passed, 12 total
Snapshots:   0 total
Time:        4.448 s
```

4. ProtectedRoute.jsx

```
PASS src/components/ProtectedRoute.test.jsx
ProtectedRoute Component
  ✓ redirects to login when no token or user data exists (46 ms)
  ✓ redirects to login when token exists but user data is missing (6 ms)
  ✓ redirects to login when user role does not match allowedRole (8 ms)
  ✓ renders children when user is authenticated and has correct role (16 ms)
  ✓ handles corrupted JSON in localStorage gracefully (10 ms)

Test Suites: 1 passed, 1 total
Tests:       5 passed, 5 total
Snapshots:   0 total
Time:        3.806 s
```

5. StatusToast.jsx

PASS src/components/StatusToast.test.jsx

StatusToast Component

- ✓ does not render when toast prop is null (30 ms)
- ✓ renders toast message correctly (51 ms)
- ✓ renders SUCCESS style correctly (16 ms)
- ✓ renders ERROR style correctly (13 ms)
- ✓ renders INFO style correctly (explicit type) (13 ms)
- ✓ defaults to INFO style when type is missing (9 ms)
- ✓ calls onClose when close button is clicked (24 ms)
- ✓ auto-closes after default duration (4000ms) (14 ms)
- ✓ auto-closes after custom duration (10 ms)
- ✓ clears timer on unmount to prevent memory leaks (7 ms)

Test Suites: 1 passed, 1 total

Tests: 10 passed, 10 total

Snapshots: 0 total

Time: 4.17 s

- Pages:

▼ Frontend	
▼ src	
> assets	
> components	
> config	
> hooks	
▼ pages	
🔗 AddComplaintPage.jsx	
🔗 AddComplaintPage.test.jsx	U
🔗 AdminDashboard.jsx	M
🔗 CommitteeDashboard.jsx	1M, M
🔗 CreateAccountPage.jsx	M
🔗 CreateAccountPage.test.jsx	U
🔗 DashboardHome.jsx	
🔗 ForgotPassword.jsx	M
🔗 ForgotPassword.test.jsx	U
🔗 Login.jsx	
🔗 Login.test.jsx	U
🔗 ProfilePage.jsx	M
🔗 ProfilePage.test.jsx	U
🔗 ResetPassword.jsx	M
🔗 ResetPassword.test.jsx	U
🔗 RoleLogin.jsx	M
🔗 RoleLogin.test.jsx	U
🔗 StudentDashboard.jsx	M
🔗 App.jsx	

1. AddComplaintPage.jsx

PASS src/pages/AddComplaintPage.test.jsx

AddComplaintPage Component

- ✓ renders all form fields correctly (230 ms)
- ✓ updates form state on user input (69 ms)
- ✓ restricts title length input visually (30 ms)
- ✓ restricts description length input visually (23 ms)
- ✓ validates required fields (empty submission) (38 ms)
- ✓ validates short title and description (46 ms)
- ✓ validates alphanumeric content (symbols only) (45 ms)
- ✓ detects character repetition spam (Regex) (35 ms)
- ✓ detects when description is a copy of title (36 ms)
- ✓ detects single word frequency threshold (Short Desc) (44 ms)
- ✓ detects single word frequency threshold (Long Desc) (36 ms)
- ✓ detects high repetition ratio (many repeated words) (46 ms)
- ✓ detects low vocabulary diversity (32 ms)
- ✓ detects repeated phrases (Short Desc) (44 ms)
- ✓ detects repeated phrases (Medium Desc) (31 ms)
- ✓ handles valid file upload and preview (27 ms)
- ✓ rejects invalid file types (27 ms)
- ✓ rejects single file larger than 10MB (20 ms)
- ✓ rejects total upload size larger than 20MB (30 ms)
- ✓ rejects duplicate files (27 ms)
- ✓ enforces max file count (3) (21 ms)
- ✓ removes a file (30 ms)
- ✓ removes all files (20 ms)
- ✓ handles successful submission (79 ms)
- ✓ handles API Error: 400 Spam (84 ms)
- ✓ handles API Error: 500 Server Error (64 ms)
- ✓ handles API Error: Network Error (93 ms)
- ✓ handles API Error: No Response (Request made) (79 ms)
- ✓ handles API Error: Generic/Unexpected (60 ms)
- ✓ prevents submission if user is not logged in (localStorage) (25 ms)
- ✓ navigates to 'My Complaints' from success modal (55 ms)
- ✓ resets form when 'File Another' is clicked (61 ms)
- ✓ closes success modal when backdrop is clicked (48 ms)

Test Suites: 1 passed, 1 total

Tests: 33 passed, 33 total

Snapshots: 0 total

Time: 5.4 s, estimated 9 s

2. CreateAccountPage.jsx

PASS src/pages/CreateAccountPage.test.jsx (12.685 s)

CreateAccountPage - UI + flows

- ✓ renders create mode with StudentForm by default (181 ms)
- ✓ student password validation rejects weak password and prevents submit (767 ms)
- ✓ student email validation rejects wrong domain and prevents submit (786 ms)
- ✓ student show/hide password toggle changes input type (141 ms)
- ✓ student successful submit calls axios.post, shows success, and resets form (966 ms)
- ✓ student axios.post failure shows backend error message (876 ms)
- ✓ switch account type to committee and validate create flow (1233 ms)
- ✓ committee create - backend error shows message (662 ms)
- ✓ delete mode - shows validation error for wrong email domain (407 ms)
- ✓ delete mode - cancel confirmation does not call axios.delete (457 ms)
- ✓ delete mode - backend user-not-found for committee maps to 'Committee not found' (507 ms)
- ✓ delete mode - backend generic error shows message (439 ms)
- ✓ delete mode - dismiss confirmation dialog (473 ms)
- ✓ delete mode - successful deletion (545 ms)
- ✓ delete mode - user not found error for committee (529 ms)
- ✓ delete mode - generic backend error (486 ms)
- ✓ delete mode - fallback error message (507 ms)

Test Suites: 1 passed, 1 total

Tests: 17 passed, 17 total

Snapshots: 0 total

Time: 14.184 s, estimated 15 s

3. ForgotPassword.jsx

PASS src/pages/ForgotPassword.test.jsx

ForgotPassword Component

- ✓ renders correctly with inputs and buttons (232 ms)
- ✓ shows error when invalid email is entered (73 ms)
- ✓ handles SUCCESSFUL submission and navigates after delay (57 ms)
- ✓ handles FAILED submission (API Error) (57 ms)
- ✓ shows default error message for network errors (40 ms)
- ✓ navigates back to login when "Back to Login" is clicked (13 ms)
- ✓ navigates to login when "Login here" link is clicked (12 ms)

Test Suites: 1 passed, 1 total

Tests: 7 passed, 7 total

Snapshots: 0 total

Time: 4.371 s

4. Login.jsx

PASS src/pages/Login.test.jsx

Login Page Component

- ✓ renders the correct logo, title, and subtitle (70 ms)
- ✓ renders all three role buttons (151 ms)
- ✓ navigates to /role-login with "admin" state when Admin button is clicked (31 ms)
- ✓ navigates to /role-login with "student" state when Student button is clicked (24 ms)
- ✓ navigates to /role-login with "committee" state when Committee button is clicked (20 ms)

Test Suites: 1 passed, 1 total

Tests: 5 passed, 5 total

Snapshots: 0 total

Time: 4.145 s

5. ProfilePage.jsx

PASS src/pages/ProfilePage.test.jsx

ProfilePage Component

- ✓ renders basic user information correctly (92 ms)
- ✓ handles invalid JSON in localStorage (Catch Block) (23 ms)
- ✓ handles null storedUser (Empty localStorage) (15 ms)
- ✓ derives Department from ID correctly using deptMap (20 ms)
- ✓ derives different Department (Branch Coverage for Map) (19 ms)
- ✓ uses explicit Department if provided in user object (27 ms)
- ✓ falls back to "Computer Engineering" if ID code is not in map (19 ms)
- ✓ falls back to "Computer Engineering" if ID is too short (19 ms)
- ✓ handles Malformed Email (No @ symbol) (24 ms)
- ✓ renders Role ONLY when username contains letters (Admin/Staff/Faculty) (17 ms)
- ✓ renders ID, Dept, and Role when username is purely numeric (Student) (22 ms)
- ✓ validates inputs correctly: Mismatch (175 ms)
- ✓ validates inputs correctly: Too Short (< 8 chars) (61 ms)
- ✓ validates inputs correctly: Regex Complexity (52 ms)
- ✓ validates inputs correctly: No Token in Storage (64 ms)
- ✓ handles successful password update flow (94 ms)
- ✓ handles API failure (Server Error with message) (66 ms)
- ✓ handles API failure (Network Error / No response data) (56 ms)

Test Suites: 1 passed, 1 total

Tests: 18 passed, 18 total

Snapshots: 0 total

Time: 4.592 s, estimated 13 s

6. ResetPassword.jsx

```
PASS src/pages/ResetPassword.test.jsx
ResetPassword component - fixed label queries
  ✓ renders with prefilled email from location.state (88 ms)
  ✓ validation: shows 'Please fill in all fields.' when fields empty (37 ms)
  ✓ validation: password mismatch shows 'Passwords do not match.' (146 ms)
  ✓ validation: short password shows length error (49 ms)
  ✓ validation: OTP length validation shows error (54 ms)
  ✓ successful reset calls API, shows success and navigates after timeout (62 ms)
  ✓ API error with response.message shows that message (57 ms)
  ✓ API error network (no response) shows generic fallback error (52 ms)
  ✓ Resend OTP: requires email first and shows error when missing (37 ms)
  ✓ Resend OTP: success path shows success message (33 ms)
  ✓ Resend OTP: backend error with message shows that message (34 ms)
  ✓ Resend OTP: network error shows fallback error (30 ms)
  ✓ loading state disables submit button while awaiting (56 ms)
  ✓ navigates to Forgot Password page on Back button click (9 ms)
  ✓ updates email field value correctly (9 ms)
  ✓ OTP field accepts only numeric input and enforces max length (14 ms)
  ✓ Resend OTP button triggers loading state while axios pending and becomes enabled after resolve (46 ms)

Test Suites: 1 passed, 1 total
Tests:       17 passed, 17 total
Snapshots:   0 total
Time:        4.354 s, estimated 6 s
```

7. RoleLogin.jsx

```
PASS src/pages/RoleLogin.test.jsx
RoleLogin Component
  ✓ renders correctly with default role 'User' when no state is provided (211 ms)
  ✓ renders correctly with specific role passed in state (17 ms)
  ✓ renders password visibility toggle correctly (57 ms)
  ✓ updates input fields and clears errors on change (208 ms)
  ✓ validates email format before API call (60 ms)
  ✓ prevents submission when already loading (Double Click Protection) (50 ms)
  ✓ handles successful ADMIN login (53 ms)
  ✓ handles successful STUDENT login (50 ms)
  ✓ handles successful COMMITTEE login (57 ms)
  ✓ handles successful login with UNKNOWN/DEFAULT role (64 ms)
  ✓ handles API success but missing role in response (44 ms)
  ✓ handles API error with specific server message (65 ms)
  ✓ handles API error with generic network failure (58 ms)
  ✓ navigates back when Back button is clicked (9 ms)
  ✓ navigates to forgot password page (7 ms)
  ✓ ensures intendedRole is always a string even if location state is missing (46 ms)

Test Suites: 1 passed, 1 total
Tests:       16 passed, 16 total
Snapshots:   0 total
Time:        4.873 s, estimated 13 s
```

• Overall Coverage

File	% Stmts	% Branch	% Funcs	% Lines	Uncovered Line #s
All files	97.92	93.18	100	97.84	
components	100	98.68	100	100	
ComplaintsTable.jsx	100	100	100	100	
DashboardNavbar.jsx	100	96.07	100	100	27,62
DashboardSidebar.jsx	100	100	100	100	
ProtectedRoute.jsx	100	100	100	100	
StatusToast.jsx	100	88.88	100	100	28
config	100	100	100	100	
api.js	100	100	100	100	
pages	97.49	89.69	100	97.41	
AddComplaintPage.jsx	94.42	82.38	100	94.17	...7,244,291-293,302-304,429,433
CreateAccountPage.jsx	100	91.66	100	100	73,209-269,313
ForgotPassword.jsx	100	100	100	100	
Login.jsx	100	100	100	100	
ProfilePage.jsx	100	100	100	100	
ResetPassword.jsx	100	100	100	100	
RoleLogin.jsx	100	100	100	100	