

Walky Admin Portal Unit Test Plan

Status	Done
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♣ Task type	Work

Task Description

This page documents unit tests for the **Walky Admin Portal.** The goal is to ensure that core UI components render properly and behave as expected based on props, state, and user interactions.

X Executive Summary

During my internship, I developed, executed, and documented **comprehensive automated tests** for the Walky Admin Portal using **Jest** and **React Testing Library**.

Impact at a glance:

- Brought all core pages and UI components under automated test coverage, eliminating major untested areas in the portal
- The streamlined QA by automating repetitive checks for login, tables, and forms, reducing reliance on repeated manual validation before releases
- Strengthened accessibility compliance through tab navigation, keyboard input, and responsive layout checks
- © Ensured light/dark mode and responsive design consistency across the portal, preventing theme-related regressions

Testing Strategy

• **Framework:** Jest + React Testing Library — used to validate individual component behavior and integration within the UI.

- File Format: .test.tsx each component has its own matching test file
- Location: All tests are inside the tests folder
- What we're testing: Just the *little parts* (like buttons, inputs, cards) using fake data or simulating what a user would do (like typing or clicking)

Pages & Components Tested

Below is a **condensed version** of the detailed test breakdown.

The full appendix contains exact checks and edge cases tested per page.

Page	Key Components Tested	Focus Areas
Login	LoginForm , Input , Button	Input handling, error clearing, password toggle, routing, responsive layout
Dashboard	StatCard , ChartSection , ExampleAdminLayout , Topbar , Sidebar	Stat accuracy, graph rendering, layout responsiveness, theme toggles
Students	InfoStatWidget , StudentTable	API integration, data formatting, dropdown actions, tooltip behavior
Engagement	Engagement Widgets	API-driven stats, fallback handling, section styling, theme consistency
Review	ReviewTable	Data formatting, dropdown actions, error handling, table styling
Campuses	CampusTable , CampusDetails	Map toggling, polygon drawing, form validation, API mutation handling
Campus Sync	SyncTable , PreviewModal , LogsModal	Sync actions, loading states, error handling
Ambassadors	Ambassador Details , Ambassador View	Form validation, CRUD actions, theme styling
Places	PlacesList	Campus filter dropdown, refresh logic, API failure handling
Place Types	PlaceTypesTable , Add/Edit Modal	Filtering, badge display, validation, API CRUD actions
Settings	SettingsForm , ImageUpload	Field validation, file handling, theme responsiveness
Verify Code / Forgot Password	VerifyCodeForm , ResetPasswordForm ,	Step-based UI flow, cooldown timers, validation rules

Page	Key Components Tested	Focus Areas
	ForgotPasswordForm	

Appendix – Detailed Test Cases

▼ Test Login Page

- Renders email and password inputs
- Password visibility toggle functions correctly
- Clears error messages when user types valid input
- Calls on Login function upon successful login
- Redirects to dashboard (or protected route) on successful login
- ✓ "Forgot password" link routes to /forgot-password + submits login form
 - · Simulates clicking the "Forgot Password" link
 - Uses MemoryRouter to mock routing behavior
 - Confirms routing to /forgot-password by checking that the test component is rendered
- Responsive layout: Inputs/buttons render properly on smaller screens
- Inputs accept keyboard input and allow tab navigation (accessibility)

▼ Test Dashboard Page

- Renders all stat cards (Walks, Events, Ideas, Surprise)
- Shows correct label, number, trend %, and graph icon per card
- ✓ Handles missing/false stat data gracefully
- Renders graph for "Active Users & Walks"
- **▼ Test** ExampleAdminLayout.tsx
 - Sidebar opens/closes based on screen size or toggle button
 - ▼ Topbar toggle button works
 - Correct page title is shown based on the current route
 - ✓ Breadcrumb renders when present
 - ▼ Theme styles apply correctly for light/dark mode

- Footer always renders at bottom of page
- **▼ Test** Topbar.tsx

 - Avatar/profile menu appears on click
 - ✓ "Sign out" button routes to login or clears session
- ✓ Test Sidebar.tsx
 - Shows correct nav links (Dashboard, Students, etc.)
 - Highlights active route
 - Closes on outside click in mobile view
- ▼ Test Students Page
 - Renders all 4 stat widgets:
 - Total Students
 - Average Age
 - Languages
 - Parents
 - Uses API calls to fetch stats from backend:
 - /users/count → total students
 - /age/average → average age
 - /language/count → unique languages
 - /users/parent-count → parent users
 - ✓ Displays fallback () if API fails or data is missing.
 - ✓ Test InfoStatWidget.tsx (Stat card)
 - Receives props correctly:
 - icon , value , label , tooltip
 - Renders layout consistently across light/dark mode
 - Applies correct theme colors and tooltip styles
 - Tooltip appears on hover with correct content

- ✓ Test StudentTable.tsx
 - ✓ Fetches and displays rows from Jusers API
 - Transforms API data into readable table format:
 - Name = first + last name
 - Dates formatted as MMM D, YYYY
 - Renders correct headers:
 - · ID, Name, Email, Joined, Last Update
 - "Three dots" menu (dropdown) renders for each row
 - ✓ Dropdown actions appear:
 - Send email
 - Flag user / Unflag user
 - · Request edit
 - · Request to delete
 - ✓ Flag button toggles color (row turns red) and text (flag <> unflag)
- ▼ Test Engagement Page
 - Renders all 3 engagement sections:
 - Walks (Purple)
 - Events (Blue)
 - Ideas (Orange)
 - Each section includes stat widgets with correct values and labels
 - Walks: Total, Pending, Active, Completed, Cancelled/Closed
 - Events: Total, Outdoor, Indoor, Public, Private
 - Ideas: Total, Active, Inactive, Collaborated
 - Stat values are fetched via API and rendered correctly
 - Displays fallback (e.g., or 0) if API returns null/missing
 - Section background colors apply correctly (purple, blue, orange)
 - Layout remains responsive across screen sizes

- Makes correct API call per section:
 - /walks/total , /walks/pending , etc.
 - /events?filter=outdoor or similar
 - /ideas/active , /ideas/collaborated , etc.
- ✓ Handles API errors gracefully (does not crash UI)
- ▼ Test Engagement Widgets (Stat cards for each section)
 - Receives correct props: value label icon tooltip color
 - Renders the stat value and label
 - Icon renders with appropriate style
 - ▼ Tooltip appears on hover with the correct label/description
 - Applies correct theme styling in light/dark mode

▼ Test Review Page

- Renders the Review page container with proper padding
- ✓ Includes the ReviewTable Component
- ✓ Test ReviewTable tsx
 - Fetches and displays rows from Jusers API with:
 - Fields: _id , first_name , last_name , reason , createdAt , reportedOn
 - Transforms API data into readable table format:
 - Combines first_name + last_name into Name
 - Formats createdAt and reportedOn as MMM D, YYYY
 - Renders correct table headers:
 - ID , Name , Reason , Joined , Reported On , and dropdown
 - Dropdown menu renders for each row with actions:
 - · Send email
 - View activity logs
 - · Suspend user
 - Request to delete

- ✓ Displays fallback if reason is missing
- ✓ Handles API errors gracefully (e.g. logs error, UI doesn't crash)
- Applies consistent table styles and responsiveness (CoreUI)
- Opens dropdown menu and displays actions for each row

▼ Test Campuses Page

- Renders the Campuses page container with proper layout and spacing
- Displays title/header: Campus Management
- Renders the + Add Campus button
- ✓ Includes the CampusTable Component
- ✓ Test CampusTable tsx
 - ▼ Fetches and displays campus data from Icampuses API
 - Fields: id , school_name , location , address , status
 - Renders correct table headers:
 - Campus , Location , Address , Status , Actions
 - ✓ Displays each row with:
 - Icon + clickable school name
 - Shortened ID preview (68613505...)
 - Location (e.g., Miami, FL)
 - Full address
 - Status badge (e.g., Inactive)
 - Action buttons: \(\simega \) Edit, \(\square \) Delete
 - Clicking the campus name toggles the Campus Boundary map below the row
 - Displays map with boundaries
 - Includes Map/Satellite toggle view
 - ✓ Edit button opens modal/form (test that the edit action is triggered)
 - ✓ Delete button renders (functional or not, just test presence)

- Handles API errors gracefully (logs error, doesn't crash UI)
- Applies consistent CoreUI styles and responsiveness
- ✓ Test CampusDetails.tsx
 - Renders the CampusDetails form with appropriate layout and theme styling
 - Displays correct title:
 - Edit Campus (when campus data is provided)
 - New Campus (when creating from scratch)
 - ✓ Pre-fills form inputs with campusData from navigation state
 - ✓ Handles form input changes:
 - Campus Name T Phone Number T Address T City T State T ZIP Time Zone
 - ✓ <u>Dawn Time</u> <u>Dusk Time</u>
 - Campus Status dropdown
 - Multi-select ambassador dropdown
 - Renders the Campus Boundary map section with draw polygon support
 - Displays initial polygon when provided
 - Fires onBoundaryChange when updated
 - ✓ Validates required fields before submission
 - Shows error messages for missing required fields
 - ✓ Blocks save if polygon is missing.
 - Submits form via mutation:
 - POST request if new campus
 - request if editing an existing one
 - Shows success toast on save
 - Shows error alert on failure
 - ✓ Handles cancel action (navigates back to Campuses)
- ▼ Test CampusSync Page
 - Renders the Campus Sync page with proper layout and styling

- ✓ Displays header: Campus Sync Management
- Renders Sync All Campuses and View Logs buttons
- Fetches and displays rows with:
 - Campus name
 - Coordinates badge (Configured / Not Set)
 - · Places count
 - Last sync (formatted date or "Never")
 - Sync status badge (Completed, Failed, Partial, etc.)
 - API calls used
 - Action buttons: Sync, M Preview
- ✓ Handles Sync Campus button:
 - ▼ Triggers individual sync mutation
 - Shows loading spinner while syncing
 - Updates status and displays success or failure alert
- Handles Sync All Campuses button:
 - Triggers bulk sync mutation
 - Shows progress bar and summary message on completion
- Opens Preview Modal on button click
 - Displays area, center, bounds, and other metadata
- Opens Logs Modal on button click
 - Displays latest sync logs in table format
- ✓ Displays loading spinners and handles errors gracefully

▼ Test Ambassadors Page

- Renders the Ambassadors page container with proper layout and spacing
- ✓ Displays title/header: Ambassador Management
- Renders the + Add Ambassador button
- ✓ Fetches and displays ambassador data from Jambassadors API

- ✓ Fields: name , email , campus_name , major , status
- ✓ Status badge (Active / Inactive)
- Action buttons: \(\) Edit, \(\) Delete
- Renders correct table headers:
 - ✓ Ambassador Email Campuses Major Status Actions
- ✓ Edit button triggers navigation to Ambassador Details page
- ✓ Delete button:
 - Shows confirmation prompt
 - ▼ Triggers delete mutation and shows success/error alerts
- Renders loading skeleton while fetching
- Displays fallback message and call-to-action when ambassador list is empty
- Applies consistent CoreUl styles and responsiveness
- ✓ Test AmbassadorDetails.tsx
 - Renders the AmbassadorDetails form with proper layout and theme styling
 - ✓ Pre-fills form inputs with ambassadorData from navigation state
 - ✓ Handles form input changes:
 - ✓ Full Name
 - ✓ Email
 - ✓ Phone
 - Student ID
 - Major
 - Graduation Year
 - ✓ Bio
 - Profile Image URL
 - Status
 - ✓ Validates form:
 - Required: name, email

- Optional but validated: phone, student ID, graduation year
- ✓ Real-time validation feedback
- Save button:
 - Triggers POST (new) or PUT (edit) via mutation
 - Shows success alert and navigates to Ambassadors list
- Cancel button navigates back to Ambassadors
- ✓ Handles errors with contextual messaging (e.g., validation errors, servererrors)
- Displays loading state when fetching data for editing
- Applies consistent CoreUI styling and dark/light theme support
- ✓ Test AmbassadorView.tsx
 - ✓ Loads Ambassador Details With correct props based on route param

 - Renders Ambassador Details inside padded container

▼ Test Places Page

- Renders the Places page container with proper layout and spacing
- Displays title/header: Places Management
- Renders campus dropdown:
 - ▼ Fetches campus list from /campuses API
- Renders Refresh button:
 - Disabled if no campus is selected
 - ▼ Triggers refetchPlaces() and shows "Refreshing..." alert
- ✓ Places list panel:
 - Renders only after a campus is selected
 - Shows loading spinner while fetching
 - ✓ Displays list of places with pagination (via PlacesList)

- ✓ Calls placeService.getAll() With filters
- ✓ Alerts:
 - Campus fetch failure alert
 - Places fetch failure alert
 - Info alert for refresh
- ✓ Handles empty states:
 - ✓ Before campus selection → "Select a campus"
 - ✓ After selection + no data → "No places found"
- Applies consistent CoreUI layout and responsiveness
- ▼ Test Place Types Page
 - Renders the Place Types page with layout and CoreUl structure
 - Displays title/header: Place Types Management
 - Fetches place types from /place-types API
 - Query includes search + active toggle
 - Search bar:
 - ▼ Filters place types by name or description
 - "Show inactive" checkbox toggles visibility of inactive items
 - ✓ Table headers:
 - ✓ Name Description Google Types Places Count Status Actions
 - ✓ Table row data:
 - Displays up to 3 Google types as badges
 - Extra types summarized as +x more
 - ✓ Badge for status (Active / Inactive)
 - Count of associated places
 - Add/Edit Modal:
 - Form fields: name, description, Google types, active toggle
 - Displays scrollable Google types list

- ✓ Shows "Selected types" summary
- ✓ Validation:
 - ✓ Name required
 - At least 1 Google type required
- Triggers create or update mutation
- Success and error alerts
- ✓ Delete Modal:
 - Confirmation message with place count warning
 - Triggers delete mutation
 - Shows success/error alert
- ✓ Handles empty list fallback
- Shows loading spinner while fetching data

▼ Test Settings Page

- Renders the Settings page with layout and styling
- Contains title card and form elements for:
 - School Name input (with label and help text)
 - Display Name (visible to students) input (with label and help text)
 - Fmail Domain input (with label and help text)
 - School Logo uploader (ImageUpload component)
 - Accepts JPG, PNG, SVG formats
 - ✓ Displays recommended size and max size info
- ✓ Validates all required fields (school name, display name, email domain)
- ✓ Calls handleSubmit on Save button click
 - Assembles form data including file object for logo
 - Logs payload (simulated API submission)
- Cancel button present (no functionality yet)
- Adapts styling based on current theme (light/dark mode via useTheme)

▼ Test Verify Code Page

- ✓ Initial render (step = 'verify')
 - Renders logo and title: Enter Verification Code
 - Shows email and verification code inputs
 - Shows Verify Code button
 - Renders resend code button with default state
- ✓ Verification step
 - ✓ Calls handleVerify and logs payload
 - ▼ Transitions to "reset" step on success
 - Displays error on invalid code
- Resend code logic
 - ✓ Disables button when cooldown is active
 - Sends new request and starts 30s countdown
 - ✓ Displays updated text: Resend available in XXs
- Reset Password step (step = 'reset')
 - ▼ Title updates to Reset Your Password
 - Renders password and confirm inputs
 - Shows eye toggle for show/hide password
 - Shows Reset Password button
- Password validation
 - Error for mismatched passwords
 - Error for password < 8 characters</p>
 - Successful POST logs in and navigates to Magin

▼ Test Forgot Password Page

- Renders the Forgot Password page with layout and styling
- Displays title/header: Forgot your password?
- Renders the form when submitted === false

- ✓ Input: Email address With label, placeholder, and required
- ✓ Submit button: Send Reset Link
- Secondary button: Back to login
- Shows error message if error is set
- ✓ Shows confirmation message when submitted === true
 - ✓ Message: If your email is registered...
 - Styled with green background and rounded card
- ✓ Handles API failure and displays fallback error

Visuals

Login.tsx - July 1

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 NavSideBar.tsx -July 8



ReviewTable.tsx -July 9



CampusSyncc.test.tsxJuly 16

• App.tsx - July 8

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• Topbar.tsx - July 8

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z shows area menu on click (392 ms)
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• Students.tsx - July 8



StudentTable.tsx - July9

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ExampleAdminExampleJuly 8

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 InfoStatWidget.tsx -July 8



Engagement.tsx - July9



AmbassadorsDetails.test.ts.
 July 22



 Settings.test.tsx -July 23



Ambassadors.test.tsxJuly 17



VerifyCode.test.tsxJuly 29



• All Tests

• Review.tsx - July 9



• Campuses.tsx - July 9



 CampusDetails.test.tsx -July 16



AmbassadorView.test.tsxJuly 22



 CampusTable.test.tsx -July 16



Places.test.tsx - July 23



ForgotPassword.test.ts:July 29



 PlaceTypes.test.tsx -July 23

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Test Suites: 23 passed, 23 total
Tests: 187 passed, 187 total
Snapshots: 0 total

Snapshots: 0 total
Time: 6.673 s
Ran all test suites.

Done in 7.56s.