**User Management Dashboard Design Document**

**Overview**

The User Management Dashboard is an administrative interface for the Airiam RAG Service that enables authorized administrators to create, view, modify, and delete user accounts within the system. This dashboard provides comprehensive user management capabilities, including role assignment, account status controls, and user details management.

This document outlines the functionality, design elements, and implementation details for the User Management Dashboard. It provides developers with a clear understanding of components, interactions, and expected user experience. Each UI element is described with its purpose, behavior, and technical implementation details.

The User Management Dashboard is critical for multi-user environments, enabling proper access control and account management. As part of the admin suite, this interface should be accessible only to users with appropriate administrative privileges, ensuring secure user management operations.

**Dashboard Components and Functionality**

**1. Header Section**

**Title and Search Controls**

* **Title**: Displays "User Management" in a prominent font (text-2xl, font-semibold)
* **Search Input**:
  + Located in the top-right corner
  + Placeholder text: "Search users..."
  + Filters users as you type
  + Icon: Magnifying glass
  + Clears with an X button when text is entered
* **Add User Button**:
  + Primary button with "+" icon and "Add User" text
  + Located next to search input
  + When clicked, opens the Add/Edit User Modal in "add" mode

**2. User Listing Section**

**User Table/Grid**

* **Layout Options**:
  + Table view (default): Shows detailed information in rows and columns
  + Grid view (optional): Shows user cards in a grid layout
  + View toggle in the top-right if both are implemented
* **Table Columns**:
  + User (name and email with avatar)
  + Role (admin, contributor, reviewer, viewer)
  + Status (active, inactive)
  + Created Date
  + Last Login (if tracked)
  + Actions (edit, delete)
* **Sorting**:
  + Column headers are clickable for sorting
  + Sort direction indicator (up/down arrow)
  + Default sort is by name (alphabetical)
* **Pagination**:
  + Page size selector (10, 25, 50 users per page)
  + Page navigation controls (previous, next, page numbers)
  + Shows current range (e.g., "Showing 1-10 of 42 users")

**Empty and Loading States**

* **Empty State**:
  + Shown when no users match the search criteria
  + User icon with "No users found" message
  + Suggestion to try a different search or add a new user
* **Loading State**:
  + Skeleton loader or spinner while user data is loading
  + Maintains table structure during loading

**3. User Detail Panel**

**User Information Card**

* **Layout**: Detailed card view showing complete user information
* **Display Toggle**:
  + Can be shown as a side panel or modal
  + Opens when clicking on a user row/card
  + Closes with an X button or by clicking outside
* **User Profile Section**:
  + Avatar (generated from initials or uploaded)
  + Name and email prominently displayed
  + Role with appropriate badge/indicator
  + Status indicator (active/inactive)
  + Creation date and last login timestamp
* **Activity Section** (optional):
  + Recent actions performed by the user
  + Access statistics (logins, queries, etc.)
  + Session information if applicable
* **Actions**:
  + Edit button: Opens the Add/Edit User Modal in "edit" mode
  + Delete button: Triggers deletion confirmation dialog
  + Reset Password button: Initiates password reset process
  + Disable/Enable button: Toggles user account status

**4. Add/Edit User Modal**

**Modal Header**

* **Title**: "Add New User" or "Edit User" depending on mode
* **Close Button**: "X" icon in the top-right that closes the modal

**User Form**

* **Personal Information Fields**:
  + Name (required): Text input with validation
  + Email (required): Email input with format validation
  + Profile Picture (optional): Upload button and preview
* **Account Settings Fields**:
  + Role Selection (required): Radio buttons or dropdown
    - Admin: Full access to all features
    - Contributor: Can upload, tag, and chat
    - Reviewer: Can approve/reject tags
    - Viewer: Read-only access
  + Status Toggle (edit mode only): Switch for active/inactive
  + Tenant Assignment (multi-tenant mode): Dropdown of available tenants
* **Password Fields** (add mode only):
  + Password: Password input with strength indicator
  + Confirm Password: Verification input
  + Alternative: "Send setup email" option instead of setting password

**Form Validation**

* **Field Validation**:
  + Required field indicators
  + Real-time validation with error messages
  + Submit button disabled until all required fields are valid
* **Submission Feedback**:
  + Loading state during submission
  + Success message when user is created/updated
  + Error messages for submission failures

**5. Confirmation Dialogs**

**Delete User Dialog**

* **Content**:
  + Warning message explaining the action is permanent
  + User name to confirm which user is being deleted
  + Option to transfer content to another user (optional)
* **Actions**:
  + Cancel button: Closes the dialog without deleting
  + Delete button: Confirms deletion (danger/red styling)
  + Loading state during deletion process

**Reset Password Dialog**

* **Content**:
  + Explanation of password reset process
  + Options for reset method:
    - Send reset email to user
    - Set new password directly (admin override)
* **Actions**:
  + Cancel button: Closes the dialog without resetting
  + Confirm button: Initiates the selected reset process
  + Loading state during reset process

**Testing Procedures**

**1. Header Section Testing**

**Title Display Test**

* Verify that "User Management" is displayed in the header with the correct styling

**Search Functionality Testing**

1. **Input Interaction Test**:
   * Click the search input and verify it receives focus
   * Type search terms and verify characters appear
   * Click the X button when text is present and verify it clears
2. **Search Results Test**:
   * Type a search term that should match some users
   * Verify the user list filters to show only matching users
   * Type a search term that shouldn't match any users
   * Verify empty state is displayed
3. **Search Field Scope Test**:
   * Verify search works across relevant fields (name, email, role)
   * Test partial matches and case insensitivity

**Add User Button Testing**

1. **Click Response Test**:
   * Click the "Add User" button
   * Verify the Add/Edit User Modal opens in "add" mode
   * Verify the modal title shows "Add New User"

**2. User Listing Testing**

**Table/Grid Display Testing**

1. **Layout Test**:
   * Verify table/grid displays correctly with proper alignment
   * If view toggle exists, test switching between table and grid views
   * Verify responsive behavior at different screen sizes
2. **Column Content Test**:
   * Verify all user information is displayed correctly
   * Check user avatars/initials generation
   * Verify role badges show correct roles
   * Verify dates are formatted properly

**Sort and Filter Testing**

1. **Column Sorting Test**:
   * Click each sortable column header
   * Verify sort order changes (ascending/descending)
   * Verify sort indicator appears in the correct column
   * Verify users are actually sorted correctly
2. **Combined Search and Sort Test**:
   * Enter a search term to filter users
   * Sort the filtered results
   * Verify both operations work together correctly

**Pagination Testing**

1. **Page Navigation Test**:
   * If there are multiple pages, test next/previous buttons
   * Click specific page numbers and verify correct page loads
   * Verify current page is highlighted
2. **Page Size Test**:
   * Change the number of users per page
   * Verify the correct number of users is displayed
   * Verify pagination controls update accordingly

**3. User Detail Panel Testing**

**Panel Display Testing**

1. **Open/Close Test**:
   * Click on a user row/card to open the detail panel
   * Verify the panel opens with the correct user's information
   * Close the panel and verify it disappears
   * Try opening for different users and verify data changes
2. **Content Accuracy Test**:
   * Verify all user details are displayed correctly
   * Check that timestamps and formatted values are correct
   * If activity section exists, verify it shows relevant data

**Action Button Testing**

1. **Edit Button Test**:
   * Click the Edit button
   * Verify the Add/Edit User Modal opens in "edit" mode
   * Verify the form is pre-populated with the user's data
2. **Delete Button Test**:
   * Click the Delete button
   * Verify the Delete User Dialog appears
   * Verify the dialog shows the correct user name
3. **Status Toggle Test**:
   * Click the Disable/Enable button
   * Verify loading indicator during the status change
   * Verify the user's status changes in both the detail panel and main list

**4. Add/Edit User Modal Testing**

**Modal Display Testing**

1. **Add Mode Test**:
   * Open the modal in "add" mode
   * Verify all fields are empty/default
   * Verify password fields are visible
   * Verify submit button says "Create User" or similar
2. **Edit Mode Test**:
   * Open the modal in "edit" mode for an existing user
   * Verify fields are pre-populated with correct data
   * Verify password fields are absent
   * Verify submit button says "Update User" or similar

**Form Validation Testing**

1. **Required Fields Test**:
   * Leave required fields empty and try to submit
   * Verify error messages appear for empty required fields
   * Verify submit button is disabled until all required fields are valid
2. **Format Validation Test**:
   * Enter invalid email format
   * Verify email validation error appears
   * If password fields exist, test password strength requirements
3. **Password Match Test** (add mode):
   * Enter different passwords in the two password fields
   * Verify mismatch error message appears

**Form Submission Testing**

1. **Create User Test**:
   * Fill out all required fields with valid data
   * Submit the form
   * Verify loading state during submission
   * Verify success message upon completion
   * Verify new user appears in

**User Management Dashboard Design Document (continued)**

**Testing Procedures (continued)**

**Form Submission Testing (continued)**

1. **Create User Test** (continued):
   * Verify new user appears in the user listing
   * Verify all entered information is correctly saved
2. **Update User Test**:
   * Modify some fields for an existing user
   * Submit the form
   * Verify loading state during submission
   * Verify success message upon completion
   * Verify changes are reflected in both the user listing and detail view
3. **Error Handling Test**:
   * Simulate an API error (e.g., duplicate email address)
   * Verify error message is displayed
   * Verify form remains open with entered data preserved

**5. Confirmation Dialogs Testing**

**Delete User Dialog Testing**

1. **Dialog Display Test**:
   * Initiate user deletion
   * Verify the dialog appears with correct user information
   * Verify clear warning about the permanent nature of the action
2. **Cancellation Test**:
   * Open the delete dialog
   * Click Cancel
   * Verify dialog closes
   * Verify user remains in the system
3. **Confirmation Test**:
   * Open the delete dialog
   * Click Delete/Confirm
   * Verify loading state during deletion
   * Verify success message upon completion
   * Verify user is removed from the listing

**Reset Password Dialog Testing**

1. **Dialog Display Test**:
   * Initiate password reset
   * Verify the dialog appears with reset options
   * Verify user information is correctly displayed
2. **Email Reset Test**:
   * Select "Send reset email" option
   * Confirm the action
   * Verify loading state
   * Verify confirmation that email was sent
3. **Direct Reset Test** (if available):
   * Select "Set new password" option
   * Enter new password (and confirmation if required)
   * Confirm the action
   * Verify loading state
   * Verify confirmation of password change

**6. Role-Based Access Testing**

1. **Admin Access Test**:
   * Log in as an admin user
   * Verify full access to all user management features
2. **Non-Admin Access Test**:
   * Log in as non-admin users (contributor, reviewer, viewer)
   * Verify they cannot access the user management dashboard
   * Verify they are redirected or shown an access denied message
3. **Self-Editing Restrictions** (if applicable):
   * Test whether users can/cannot modify their own role
   * Test whether users can/cannot delete their own account
   * Verify appropriate restrictions are in place