**Investment Accounts App**

**User Guide for Non-Technical Users**

**Introduction**

The Investment Accounts App is a user-friendly application designed to help users manage investment accounts and user profiles. It allows users to log in, create and manage investment accounts (Brokerage or Retirement), and, for admin users, manage additional user accounts. The app uses a graphical interface with text inputs, buttons, and dropdown menus, making it accessible for non-technical users. This guide explains how to navigate the app’s interface, perform key tasks, and handle common errors to ensure smooth operation.

**Interface Structure**

The app has three main screens:

* Login Screen: Allows users to log in with a username and password.
* Accounts Screen: Enables users to create, view, and delete investment accounts, and access the Users screen (for admins only).
* Users Screen: Allows admin users to add or remove non-admin user accounts.

**Navigation and Key Features**

Login Screen:

* Username: Enter your username (letters and spaces only, 4–20 characters).
* Password: Enter your password (letters and numbers only).
* Submit Button: Click to log in.

Buttons

* Submit: Attempts to log in

First-Time Use:

The first user to log in is automatically created as an admin. Enter a username and password, and a message will confirm: “First user created. You are now admin. Please add more users in the app.”

Accounts Screen:

* Account Name: Enter a unique name for the account (letters and spaces only, 4–20 characters).
* Account Type: Select either Brokerage or Retirement from a dropdown menu.
* Account List: Displays all created accounts with their names and types.

Buttons:

* Submit: Creates a new account if inputs are valid and the name is unique.
* Delete: Removes the selected account from the list (click an account in the list to select it).
* Users (admin only): Navigates to the Users screen.
* Logout: Returns to the Login screen, clearing the current session.

Users Screen (Admin Only)

* Username: Enter a unique username (letters and spaces only, 4–20 characters).
* Password: Enter a password (letters and numbers only).
* Confirm Password: Re-enter the password to confirm it matches.
* User List: Displays all users with their usernames and admin status.

Buttons:

* Submit: Adds a new non-admin user if inputs are valid.
* Delete: Removes the selected non-admin user (admin users cannot be deleted).
* Return: Goes back to the Accounts screen.

**User Input Handling**

* Text Inputs: The app validates inputs in real-time:
* Usernames and account names must be 4–20 characters, using only letters and spaces.
* Passwords must use letters and numbers only and match in the Users screen.
* Invalid inputs disable the Submit button and display a red error message.
* Dropdown Menus: The account type dropdown (Brokerage or Retirement) ensures valid selections.
* Button Clicks: Buttons are enabled only when inputs are valid (e.g., Submit requires valid account/user details).

**Error Handling**

Login Screen:

* Invalid Username/Password: “Invalid username or password.”

Accounts Screen:

* Duplicate Account Name: “Exists in database!” when trying to create an account with a name already in use.
* “Name must be at least 4 characters long” (if too short).
* “Name must be less than 20 characters long” (if too long).
* “Name must be letters and spaces only” (if invalid characters are used).
* No Account Selected for Deletion: The Delete button does nothing if no account is selected.

Users Screen:

* Invalid Username/Password: “Name must be at least 4 characters long” or “Name must be less than 20 characters long.”
* “Name must be letters and spaces only.”
* “Password must be letters and numbers only.”
* “Passwords do not match” (if password and confirm password differ).
* Duplicate Username: Prevents adding a user with an existing username, showing an error like “Username already taken.”
* Attempt to Delete Admin: The Delete button does nothing if an admin user is selected.

**Design Choices**

* User-Friendly Interface: The app uses clear labels, dropdowns, and color-coded validation messages (green for success, red for errors) to guide users.
* Real-Time Validation: Input fields are checked as you type, with immediate feedback to prevent mistakes.
* Automatic Saving: Changes are saved instantly, preventing data loss.

**Performance**

* Speed: The app responds quickly to user actions (e.g., adding accounts or users) due to efficient data handling and minimal disk operations.
* Scalability: The app handles small to moderate numbers of accounts and users efficiently, with no noticeable delays for typical use.

**Limitations**

* Username/Password Rules: Strict rules (e.g., letters and spaces for usernames, letters and numbers for passwords) may confuse users who want special characters.
* No Password Recovery: If a user forgets their password, there’s no recovery mechanism; admins must create a new user account.
* Single Admin: Only one admin can exist, limiting flexibility for multi-admin environments.