

Voting Application Documentation

Overview:

The Voting Application is a Java-based desktop application developed using the Swing framework. It allows users to register, log in, and vote for their favorite candidates. The application uses a contemporary UI design and maintains simplicity and ease of use, with basic security principles intact.

Features:

User Registration:

It allows new users to register by giving them a unique username and password.

It checks that both fields are filled and that the username is not taken.

User Login:

Authenticates users by checking the username and password against registered credentials.

Does not allow login if fields are empty or credentials are invalid.

Voting System:

Shows a list of candidates to choose from for the users.

Ensures that only one vote can be cast by a user.

Provides feedback on successful voting and shows the selected candidate.

Logout Functionality:

Logs out the user and reuses the voting panel.

Modern User Interface

Uses clean and user-friendly design. Each function (Login, Register, Voting) is made visually distinct.

Components

Main Class

The main class is an entry point of the application. The class manages the UI. It handles user interaction on three panels:

Login Panel

It asks the user to enter his credentials.

Contains log in buttons and the facility to go to the register panel.

Register Panel

Lets a new user create an account.

Validates the input fields and checks for a valid username.

Voting Panel

Displays a list of candidates.

Lets the user vote and logout.

Data Management:

The application makes use of a `HashMap<String, String>` to temporarily hold the user credentials in memory. The map holds the username as the key and the password as the value. The state of user votes is managed using the `has Voted` Boolean flag and the `logged In User` string.