Tax Calculation Application Documentation

Introduction

The Tax Calculation Application is a Java program designed to calculate property and vehicle taxes for a user. This application allows users to add properties and vehicles to their profile and calculate the total tax payable based on specific tax rules for each property and vehicle. The application includes user authentication, data input, and tax calculation functionalities.

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User Class
• The User class is responsible for managing user information and authentication.
• User(String username, String password): Constructor to initialize a user with a username and password.
• checkCredentials(String username, String password): Method to check if the provided username and password match the user's credentials.

Property Class
• Property(): Default constructor.
• Property(double baseValue, boolean inCity, double ageFactor, double builtUpArea): Constructor to initialize a property with specific attributes.
• calculatePropertyTax(): Method to calculate property tax based on the property's attributes.
• Getters and setters for property attributes such as base value, location (in the city or not), age factor, and built-up area.

Vehicle Class

- Vehicle(): Default constructor.
- Vehicle(String registrationNumber, String brand, double purchaseCost, double velocity, int capacity, int vehicleType): Constructor to initialize a vehicle with specific attributes.
- calculateVehicleTax(): Method to calculate vehicle tax based on the vehicle's attributes.
- Getters and setters for vehicle attributes such as registration number, brand, purchase cost, velocity, capacity, and vehicle type.

Application close

- Users can choose to close the application from the menu, which triggers the application's termination.
- Input validation and error handling are in place to ensure the application handles invalid inputs gracefully.

Main Functionality

- The TaxCalculatorApp class contains the main method that drives the application's functionality.
- The application starts with user authentication, where the user is prompted to enter their username and password.
- If the user's credentials are correct, they can access the main menu; otherwise, they are informed of a failed login.