LAB211 Assignment

Title

Write a program to manage the geographic.

Background

N/A

Program Specifications

- Develop the Country class including property and method below:
  protected String countryCode;
  protected String countryName;
  protected float totalArea;

  Implement two constructors which having parameter and without parameter.

  Implement fully functions set / get for properties.

  Implement function display () to display information of one country.

- Develop Country class inheritance EastAsiaCountries class and add the property:
  private String countryTerrain;
  Implement constructor parameter and use the super keyword to call the constructor of the class Country above.
  Override display().
- Develop "ManageEastAsiaCountries" class perform the following functions:

  1. Enter the information for 11 countries in Southeast Asia.
  2. Display already information.
  3. Search the country according to the entered country's name.
  4. Display the information increasing with the country name.
  5. Exit.

Function details:

Function 1: Display a menu and ask users to select an option.
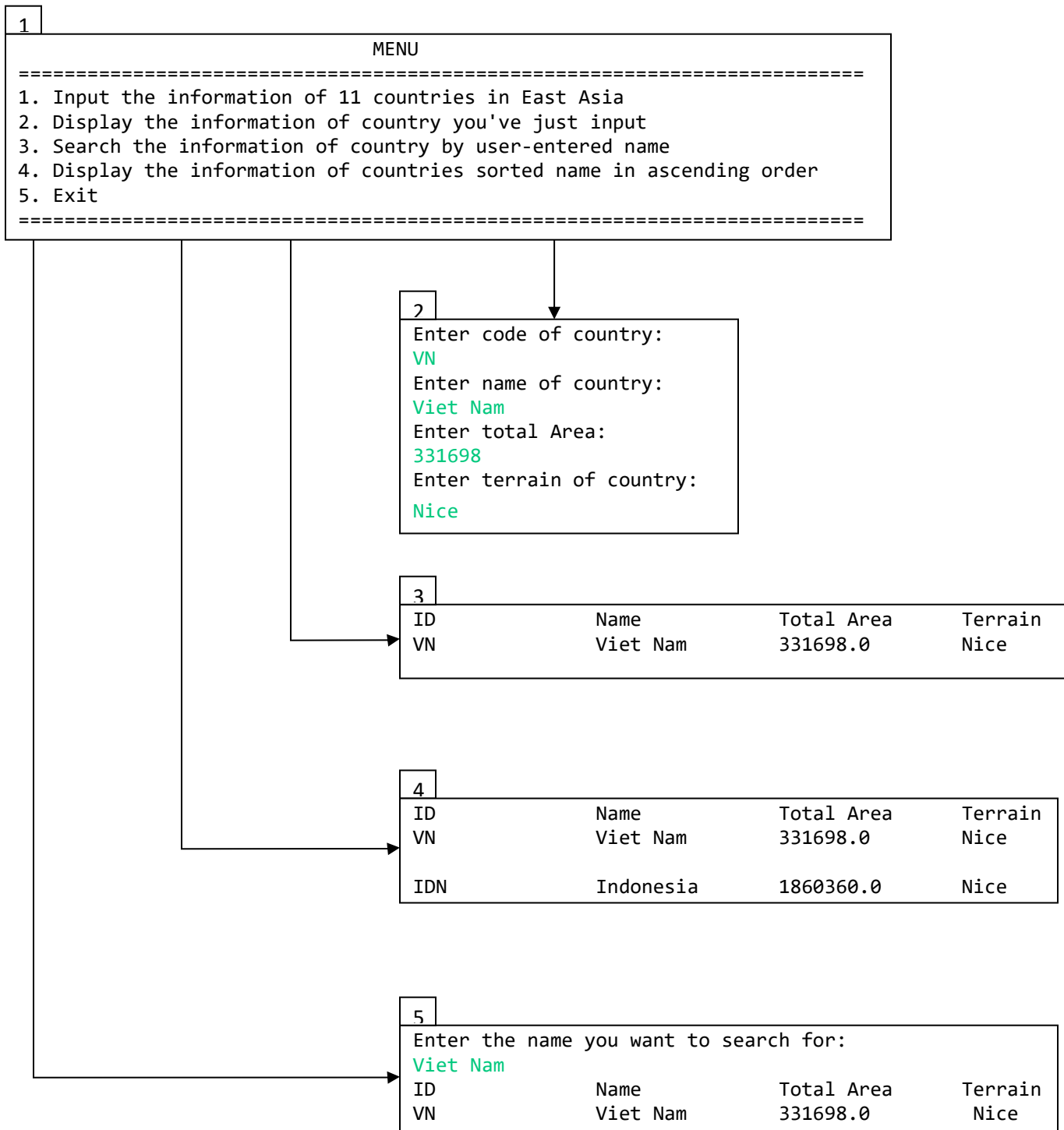
- o   User runs the program. The program prompts users to select an option.
- o   User selects an option, perform **Function 2**.

Function 2: Perform function based on the selected option.

- o   Option 1: Input the information of 11 countries in East Asia
  - a.   Require to input task information including (code, name, total area, terrain) .
  - b.   Check the valid data with the following conditions:
    - i.   Total area must be greater than 0.
  - c.   Add data into the program.
  - d.   Return to the main screen.
- o   Option 2: Display information of countries you've just input

a. Display information of countries you've just input.
b. Return to the main screen.
o Option 3: Search information of countries by user-entered name
a. Require to input the country name.
b. Display result to main screen
c. Return to the main screen.
o Option 4:Exit program

Expectation of User interface:

```
1
                               MENU
================================================================================
1. Input the information of 11 countries in East Asia
2. Display the information of country you've just input
3. Search the information of country by user-entered name
4. Display the information of countries sorted name in ascending order
5. Exit
================================================================================
```

```
2
Enter code of country:
VN
Enter name of country:
Viet Nam
Enter total Area:
331698
Enter terrain of country:
Nice
```

```
3
ID                      Name              Total Area          Terrain
VN                      Viet Nam          331698.0            Nice
```

```
4
ID                      Name              Total Area          Terrain
VN                      Viet Nam          331698.0            Nice

IDN                     Indonesia         1860360.0           Nice
```

```
5
Enter the name you want to search for:
Viet Nam
ID                      Name              Total Area          Terrain
VN                      Viet Nam          331698.0            Nice
```

Guidelines

Student must implement methods
- addCountryInformation

- getRecentlyEnteredInformation

- searchInformationByName.

- sortInformationByAscendingOrder

 in startup code.
Suggestion:
- o **Function 1: Add information for a country**

- o Implement the function:: public void addCountryInformation(EastAsiaCountries country) throws Exception

    - Input:

    - ➢ country: Information of a country.

    - Return value: List of exceptions.

- **Funtion2:** Display information of countries you've just input

- o Implement the function: public EastAsiaCountries getRecentlyEnteredInformation() throws Exception

    - Input:

    - Return value: Result or Exception.

Function 3: Search information of countries by user-entered name
- o Implement the function: public EastAsiaCountries[] searchInformationByName(String name) throws Exception

    - Input:

    - ➢ name: Country name.

    - Return value: Result of the finding country.

Function 4: Displays the names of countries by name ascending
- o Implement the function:: public EastAsiaCountries[]sortInformationByAscendingOrder() throws Exception

    - Input:

    - Return value: the list has been sorted.