Assignment 1

Instructions

You will be creating multiple classes. Each class should start with a capital letter. Ensure that all the classes created in this assignment share the same package name.

Task 1: 12 marks

Instructions

Create a class named Assignment1.

Create a static method named task1()

1) Ask the user how many elements they would like to create. **(1 mark)**
2) Create an Object array with X elements, where X represents the value in Step 1) **(2 marks)**
3) In a loop, ask the user to enter a value for each element of the array: **(1 mark)**
    a) If the value is either 0 or 1
        i) Convert the value to a Boolean
        (2 marks)
    b) If the value is within the byte range
        i) Convert the value to a byte
        (2 marks)
    c) If the value is within the short range
        i) Convert the value to a short
        (2 marks)
    d) If the value is a number
        i) Convert the value to an integer
        (2 marks)

*** No error handling needed. Expect the user to enter a valid numerical value ***
*** Conversions can be done in any way desired ***

Task 2: 3 marks

Instructions

Create a static method named task2().

1) This method takes one parameter of integer array. **(1 mark)**
2) Using any loop, output all the values of your array to the Console. **(2 marks)**

Task 3: 4 marks

Instructions

Create a static method named task3().

1) This method takes one parameter of integer array. **(1 mark)**
2) In a loop that starts at the beginning of the array to the end of the array, ask the user for a number to populate each index of the array. Do not check for validation. **(3 marks)**

Task 4: 4 marks

Instructions

Create a static method named task4().

1) Ask the user for a number that represents the number of elements they would like in their array. **(1 marks)**
2) Create an integer array with the specified # of elements (from user input above), then call the task3 method and the task2 method. **(3 marks)**

Task 5: 9 marks

Instructions

Create a class named House.

1) In the House class, create 3 instance variables with **(3 marks)**
    a. unique data types **(1 mark)**
    b. unique accessibility levels. **(1 mark)**
2) Create 7 constructors for this class (including the default constructors). **(4 marks)**
3) No main method should be present in this class.

Task 6: 3 marks

Instructions

Create a class named HouseRunner.

1) In the HouseRunner class, code a main method (that is, ensure the main method exists).
2) In the main method
    a. Instantiate the House object in 3 unique ways (using 3 unique constructors) **(1 mark)**
    b. Using printf, output the values of all three instance variables of the 3 House objects. (9 printf statements in total) **(2 marks)**

Submission

Submit all the .java files individually on Blackboard.
Zipped and/or compressed files will result in a 5-mark deduction.