HW 2: Objects, Methods, Classes, Constructors, Overloading, Reference

1. Create an integer array and store ten integers in it. Create a new integer array of the same size (10). But do not store any integers in it when you create the second array. Instead, assign the first array as the value of the second array.

   For example:

   > first array = 12,45,67,…… (total of ten such integers)
   > second array = first array

   Print all the elements of the first array using a for-loop.

   Now, change the 3rd element of the **first** array. Then, print out all the elements of the **second** array. What do you see happen? Explain the reason behind your results.

2. Create a class named Animal. Create the following attributes for the Animal class:
   - name
   - numberOfLegs
   - animalSound (*so that we can use this variable to specify what sound an animal makes*)
   - animalFood (*so that we can specify what a specific animal usually eats*)
   - habitat (*we will use this to specify where an animal usually lives*)
   - create any other attribute you want - be creative

   For the above attributes, choose the appropriate data types.

   Create a constructor for the animal class.
   Overload the constructor and create a second constructor in any way you like.

   Create the following methods for the animal class:
   - makeSound(int x)
       This method will print the sound the animal makes x times
   - eat( )
       This method will print: "animal has eaten Y" (*where Y is the same as the animalFood attribute*)

In the Main class, create 3 animal objects using your animal class.
1st object should be a lion.
2nd object should be a deer.
3rd object should be a bird *(choose any bird you want).*

Finally, use the two methods makeSound( ) and eat( ) using all three of your objects.
For example, first use lion.makeSound( ) and then use lion.eat( ) and then do the same for the deer object and the bird object. Your program should print the results in the output console.