NSBT
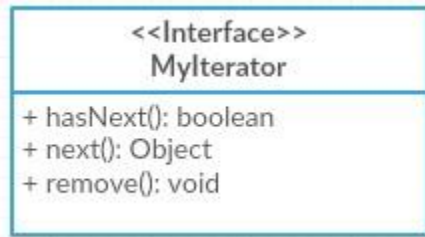
CORE JAVA - Day 8 Assignment

1. Test the following functionalities :

   a. Create class – MyClass in package pack1. Create 4 method in this class with four different access specifiers – private, default, protected, public.

   b. Create a class TestClass outside the package and test which all methods are accessible.

   c. Now create another class in package pack1 and test which all methods of MyClass are accessible and how

   d. Create a subclass of MyClass in package pack1 and test which all methods of MyClass are accessible and how

   e. Create a subclass of MyClass outside package pack1 and test which all methods of MyClass are accessible and how

   f. Create a package inside pack1 with the name subpack1. Create a class inside this subpack1 and test which all methods of MyClass are accessible and how

   g. In the subpack1, create a class which is subclass of MyClass and test which all methods of MyClass are accessible and how

2. Combine all the classes created named below now into a single application and there must be a single MainClass as the starting point of the application. Segregate the classes and interfaces according to their functionalities in different packages. The logically related classes should be in same package. Check for the access specifiers which you have already placed for variables, constructors and method. Test which all access specifiers need to be used and why.

   The classes which need to be combined in a single application are:

   a. Customer
   b. LoanAgreement
   c. LoanProduct and its subclasses
   d. Interfaces
   e. Bank

3. Create an interface 'MyIterator' as mentioned below:

```
          <<Interface>>
           MyIterator
+ hasNext(): boolean
+ next(): Object
+ remove(): void
```

The functionalities of the methods are as mentioned below:

   a. hasNext() : returns true/false based on whether there is next element in the
       array or not
   b. next(): returns the next object from the array
   c. remove(): deletes the object at the current array position and places Null at that
       index position.

4. Implement this interface as an InnerClass in Bank class to iterator over array of Customer
    Objects. Simultaneously remove all the objects where the monthlyIncome of the customer
    is less than 5lac.

5. Implement all 4 types of Inner Classes implementing the same interface.