Essay

1. Access Modifiers in Java Programming Language
   1. Public : Attribute or method is accessible across the whole project
   2. Private : Attribute or method is only accessible inside the current class
   3. Protected : Attribute or method is accessible inside the class and child class(es)
   4. No Access Modifier / Package : Attribute or method is accessible across current pakage
2. Overloading and overriding
   1. Overloading : same identifier for some method but behaves differently and have different inputs.  
      example :

//methods to calculate area of some geometric objects (circle and a box)  
//area of circle is computed as pi\*radius\*radius

public double CalculateArea(Integer radius) {  
 return (double) Math.PI\*radius\*radius;  
}

//area of a box is length times width  
public double CalculateArea(Integer length, Integer width) {  
 return (double) length\*width;  
}

* 1. Overriding : a method in parent class is modified in its’ child class for more specific job.  
     example :

class parent {  
 public void Hello() {  
 System.out.println(“Hello from the parent class !”);  
 }  
}

class child extends parent{  
 @override  
 public void Hello() {  
 System.out.println(“Hello from the child class !”);  
 }  
}

1. 3 Methods in ArrayList class :
   1. .add method 🡪 to add an element at the end of the list  
      usage : [ArrayList].add(*element*);
   2. .get method 🡪 to get an element at the ith index of the list  
      usage : [ArrayList].get(*index*);
   3. .set method 🡪 to modify or define an element at the ith index of the list  
      usage : [ArrayList].set(*index, new element*);