CSC 111 Problem Set 1

1. Correct the errors in the following code:

```java
public class Rectangle
    public int height
    public int width;

}
public class Problem1 {
    public static void main (String args[]){
        Rectangle a;
        System.out.println("Height of a:" + a.height);
        Rectangle b = new Rectangle();
        double d = 10.0;
        rectangle e = new Rectangle();
        e = d;
    }
}

- a = new Rectangle(); missing
- Rectangle b = new Rectangle();
- Rectangle e = new Rectangle();
- You can’t assign a double to a Rectangle object
```

2. Create a class that corresponds to the following class diagram, then in another class under a main method declare an Employee object then initialize the name with Ahmad Ali, age with 33 and salary with 12000:

```
public class Employee {
    public String name;
    public int age;
    public double salary;
}
```
public class Problem2 {

    public static void main(String args[]){
        Employee e = new Employee();
        e.name = "Ahmad Ali";
        e.age = 33;
        e.salary = 12000.0;
    }
}

3. What is the output of the following program:

```java
public class C {
    public int x;
    public int y;
}

public class Problem3 {
    public static void main(String args[]){
        C a = new C();
        C b = new C();
        a.x = 1;
        a.y = 2;
        b = a;
        b.x++;
        b.y++;
        System.out.println("a: x = " + a.x + " y = " + a.y);
        System.out.println("b: x = " + b.x + " y = " + b.y);
    }
}
```

```
a: x = 2 y = 3
b: x = 2 y = 3
```

4. Given the following class diagram, create the class Book, then in another class under a main method create a Book object, and then create a statement that prints the information of a that Book object.

```
public class Book {
    + publisher : String
    + title : String
    + author : String
}
```
public class Book {
    public String publisher;
    public String title;
    public String author;
}

public class Problem4 {
    public static void main(String args[]){
        Book b = new Book();
        System.out.println("Publisher: "+b.publisher + " Title: "+b.title + " Author: "+b.author);
    }
}