Question 4.1

```java
import java.awt.Rectangle;

public class Ch2ProjectQ4_1SBakshi
{
        public static void main(String[] args)
        {
                Rectangle r1 = new Rectangle(0, 0, 100, 50);

                Rectangle r2 = new Rectangle(0, 0, 100, 50);

                System.out.println(r1);

                r2.grow(10,20);
                System.out.println(r2);
        }
}
```
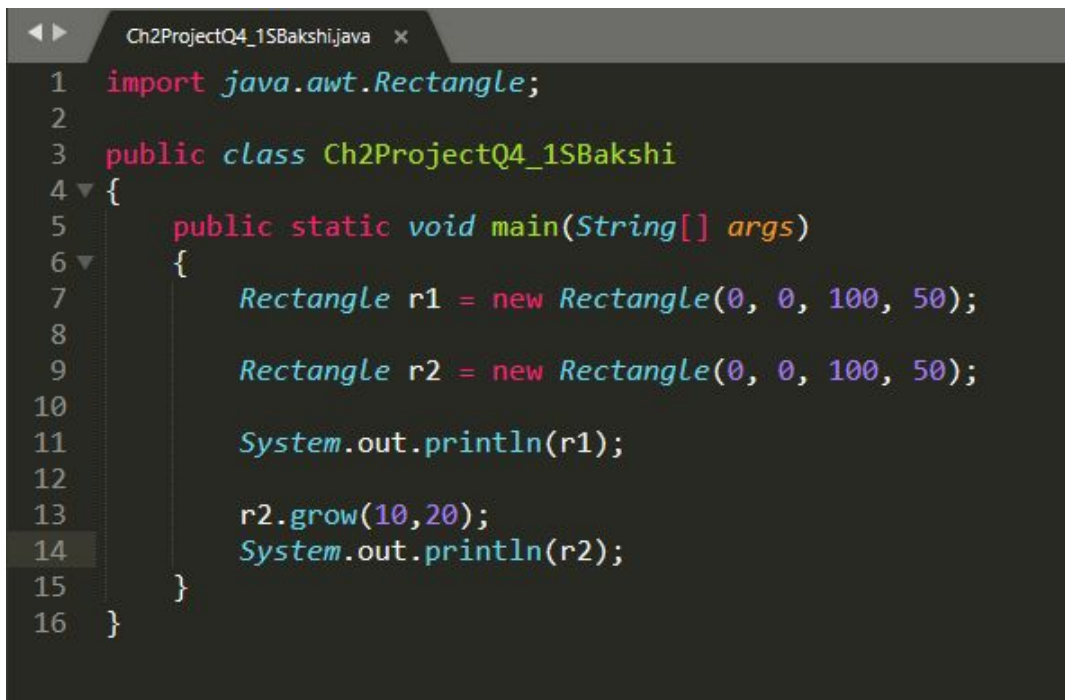
Question 4.2

```
PS C:\Users\saket\JAVA\Projects\project2\Ch2ProjectQ4SBakshi> javac .\Ch2ProjectQ4_1SBakshi.java
PS C:\Users\saket\JAVA\Projects\project2\Ch2ProjectQ4SBakshi> java Ch2ProjectQ4_1SBakshi
java.awt.Rectangle[x=0,y=0,width=100,height=50]
java.awt.Rectangle[x=-10,y=-20,width=120,height=90]
PS C:\Users\saket\JAVA\Projects\project2\Ch2ProjectQ4SBakshi>
```

```java
Ch2ProjectQ4_1SBakshi.java   ×
1   import java.awt.Rectangle;
2
3   public class Ch2ProjectQ4_1SBakshi
4 ▼ {
5       public static void main(String[] args)
6 ▼     {
7           Rectangle r1 = new Rectangle(0, 0, 100, 50);
8
9           Rectangle r2 = new Rectangle(0, 0, 100, 50);
10
11          System.out.println(r1);
12
13          r2.grow(10,20);
14          System.out.println(r2);
15      }
16  }
```

Question 4.3

```java
import java.awt.Rectangle;

public class Ch2ProjectQ4_3SBakshi
{
        public static void main(String[] args)
        {
                Rectangle r1 = new Rectangle(0, 0, 100, 50);

                Rectangle r2 = r1;

                r2.grow(10,20);

                System.out.println(r1);

                System.out.println(r2);
        }
}
```

```
PS C:\Users\saket\JAVA\Projects\project2\Ch2ProjectQ4SBakshi> java Ch2ProjectQ4_3SBakshi
java.awt.Rectangle[x=-10,y=-20,width=120,height=90]
java.awt.Rectangle[x=-10,y=-20,width=120,height=90]
PS C:\Users\saket\JAVA\Projects\project2\Ch2ProjectQ4SBakshi>
```

The output for both rectangles are identical; both have been mutated by the grow() method. This is because rectangle variables are references to rectangles without any actual rectangle data. Since r2 is set to equal to r1, both r2 and r1 are affected by the grow() method.

Question 4.4

```
PS C:\Users\saket\JAVA\Projects\project2\Ch2ProjectQ4SBakshi> javac .\Ch2ProjectQ4_4SBakshi.java
PS C:\Users\saket\JAVA\Projects\project2\Ch2ProjectQ4SBakshi> java Ch2ProjectQ4_4SBakshi
150.0
3000.0
PS C:\Users\saket\JAVA\Projects\project2\Ch2ProjectQ4SBakshi>
```

The output shows two different values for n1 and n2 because they are number variables that contain actual data instead of reference to double numbers. As a result, when n2 is mutated, it does not change the reference of n1 because n1 is its own entity and not a reference.