Week 7 Mon and Wed Lab Assignments

- **Mark the following statements as True or False:**
  - The constructor of a subclass specifies a call to the constructor of the superclass in the heading of the constructor's definition. **False**
  - The constructor of a subclass specifies a call to the constructor of the superclass using the name of the class.

    False
  - A subclass must define a constructor. **False**
  - In Java, polymorphism is implemented using late binding. **True**

- **Consider the following class definition:**

```
public class AClass
{
        private int u;
        private int v;

        public void print()
        {
        }

        public void set(int x, int y)
        {
        }

        public AClass()
        {
        }

        public AClass(int x, int y)
        {
```

```
        }
}
```

What is wrong with the following class definition?

```
public class BClass AClass
{
        private int w;

        public void print()
        {
                System.out.println("u + v + w = " + (u+v+w);
        }

        public BClass()
        {
                super();
                w = 0;
        }


        public BClass(int x, int y, int z)
        {
                super(x, y);
                w = z;
        }
}
```

-Answers
-public class BClass **extends** AClass
-set(x,y) instead of super(x,y)

- **Suppose that you have the following class definition:**

```
public class One
{
        private int x;
        private int y;
```

```
        public void print()
        {
                System.out.println(x + "  " + y);
        }

        protected void setDate(int u, int v)
        {
                x = u;
                y = v;
        }
}
```

Consider the following class definition:

```
public class Two extends One
{
        private int z;
        public void setDate(int a, int b, int c)
        {
                //Postcondition: x = a; y =b; z = c;
        }

        public void print()
        {
                //Output the values of x, y and z
        }
}
```

- Write the definition of the method **setDate** of the **class Two** as described in the class definition.
  -setDate(a,b), z = c;
- Write the definition of the method **print** of the **class Two** as described in the class definition.
  -System.out.println(getx() + gety() + getz());

- **Explain and give example:** What does the operator **instanceof** do? - checks whether an object is an instance of a class or not.

```
// create an object of Main
```

```
 Main obj = new Main();
// checks if obj is an instance of Main
boolean result2 = obj instanceof Main;
```