

TUTORIAL 5: Objects and methods

Task 1

Look at these Java classes and answer the questions:

```
public class A
{
    private int a;

    public A(int a)
    {
        this.a = a;
    }

    public void print()
    {
        System.out.println(
            "The result is" + square());
    }

    public int square()
    {
        return a*a;
    }
}

public class TestClass
{
    public static void main(String[] args)
    {
        A a1 = new A(8);
        a1.print();
    }
}
```

1. What method is the entry point for running this code?
2. What kind of object is created when this method runs?
3. What does the **constructor** of class A do?
4. What does the **square method** in class A do?
5. What does the **print method** in class A do?
6. What will the output be when this code runs?

Task 2

Look at these Java classes and answer the questions:

```
public class A
{
    private B b;

    public A(int value)
    {
        this.b = new B(value);
    }

    public void print()
    {
        System.out.println(b.test());
    }
}
```

```
public class B
{
    private int x;

    public B(int x)
    {
        this.x = x;
    }

    public int test()
    {
        return x*5;
    }
}
```

```
public class TestClass
{
    public static void main()
    {
        A a = new A(6);
        a.print();
    }
}
```

1. What does the **constructor** of class *A* do?
2. What does the **constructor** of class *B* do?
3. What **objects** are created when the *main* method executes?
4. Describe the instance variables of these objects.
5. Describe the relationship between these objects.
6. What does the **test method** in class *B* do?
7. What does the **print method** in class *A* do?
8. What will the output be when this code runs?