Exercise 1

File Name: Projectile.java

```
import java.util.Scanner;

class Projectile{

	private final double G = 9.8;

	public static void main(String[] args){
		Scanner input = new Scanner(System.in);

		System.out.print("Enter projectile initial velocity: ");
		double initialVelocity = input.nextDouble();

		Projectile prj = new Projectile();

		double maxHeight = prj.calculateMaxHeight(initialVelocity);
		System.out.printf("Maximum Height: %.2f", maxHeight);
	}

	public double calculateMaxHeight(double x){
		return (Math.pow(x, 2) / (2 * G));
	}
}
```

Exercise 2

File Name: PrintTest.java

```
class PrintTest{
	public static void main(String[] args){
		int a = 2, b = 3;

		System.out.println("a + b = " + a + b);
		System.out.println("a + b = " + (a + b));
		System.out.println(a + b + " a + b");
	}
}
```

The first println displays “a + b = 23”, because it is adding on the string values of a, and then adding the string value of b, 2 and 3 respectively.

The second println displays “a + b = 5”, because with the ‘a + b’ in a bracket, it runs a calculation.

The third println displays “5 a + b”, because at first, it runs the calculation of ‘a + b’ as an integer variable is first seen in the method, then it adds the string “ a + b” onto it.

Exercise 3

File Name: DataType.java

```
class DataType{
	public static void main(String[] args){
		int num1 = 4, num2 = 6;

		Calculation calc = new Calculation();

		int num3 = calc.calcInt(num1, num2);

		System.out.println("a + b = " + num3);
	}
}

class Calculation{
	public int calcInt(int x, int y){
		return x + y;
	}
}
```