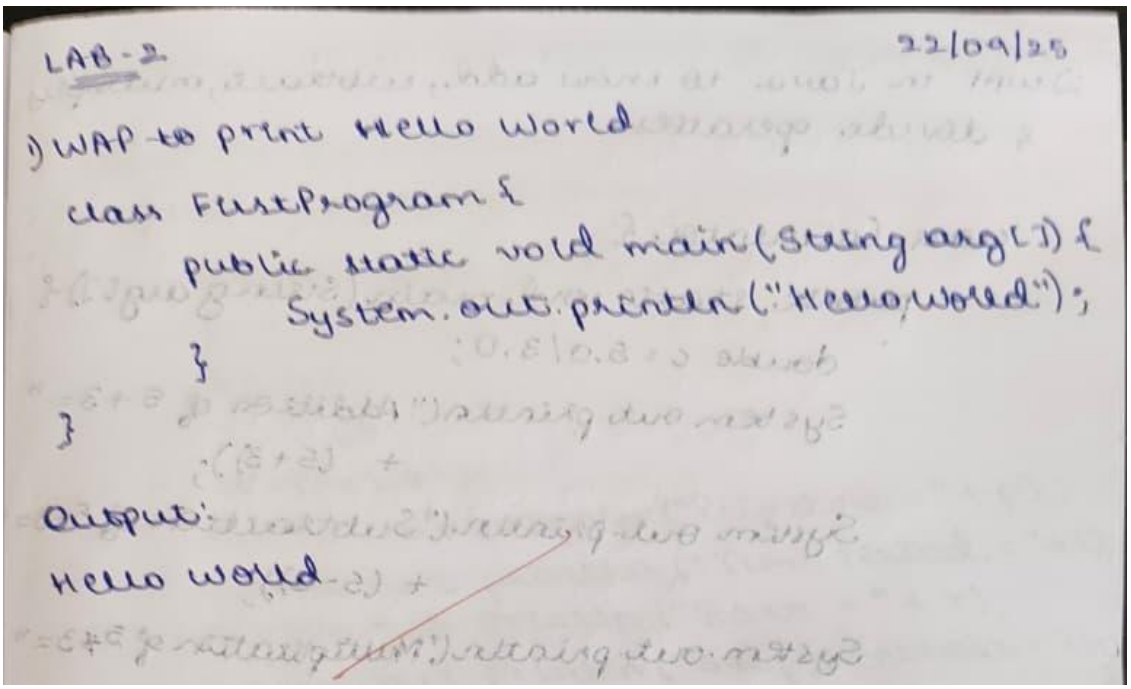
LAB – 2 Programs

1. Sample Java Program

```
class FirstProgram {
        public static void main (String arg[]) {
                System.out.print("Hello World");
        }
}
```

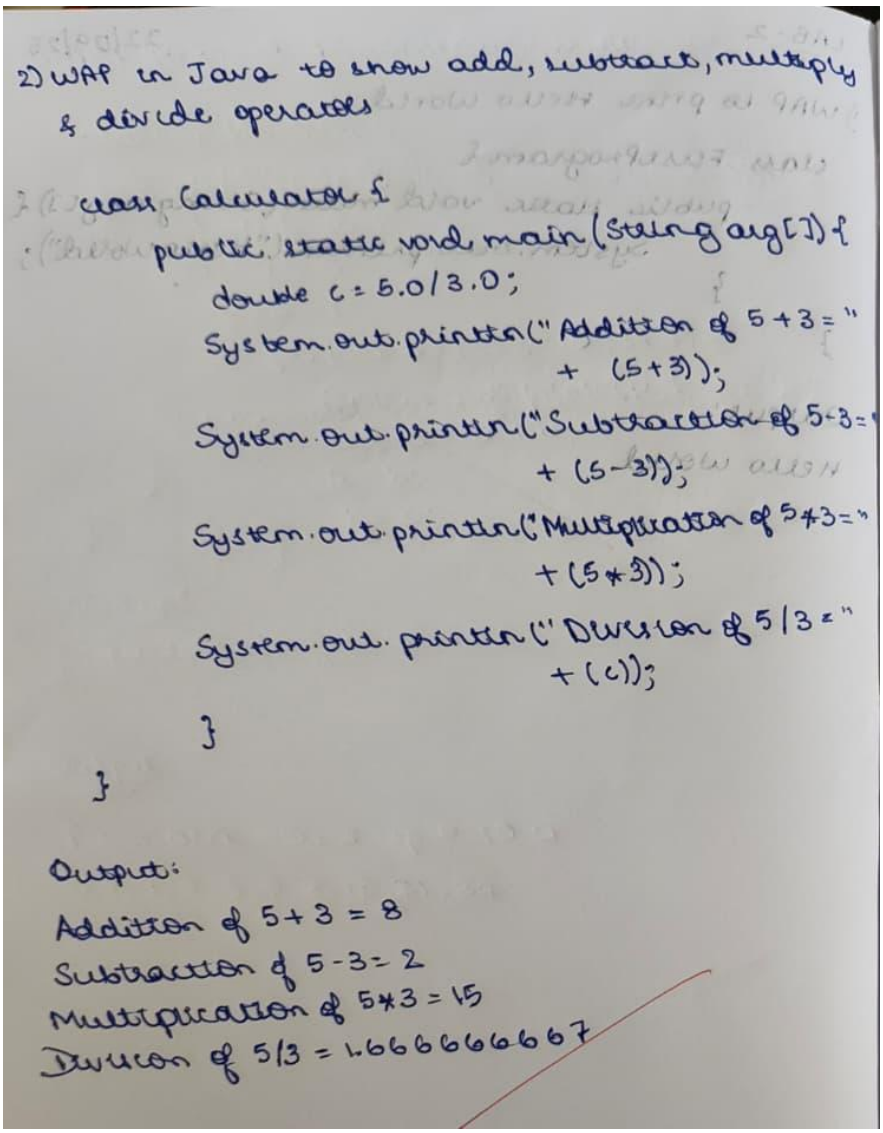
```
PS C:\Users\Sudhanva S M\Documents\Java> javac FirstProgram.java
PS C:\Users\Sudhanva S M\Documents\Java> java FirstProgram
Hello World
```



2. Simulate a simple calculator and show the add, subtract, multiply and divide options.

```
class Calculator {
        public static void main (String arg[]) {
                double c = 5.0/3.0;
                System.out.println("Addition of 5 + 3 = " + (5+3));
                System.out.println("Subtraction of 5 - 3 = " + (5-3));
                System.out.println("Multiplication of 5 * 3 = " + (5*3));
                System.out.println("Division of 5 / 3 = " + c);
        }
}
```

```
PS C:\Users\Sudhanva S M\Documents\Java> javac Calculator.java
PS C:\Users\Sudhanva S M\Documents\Java> java Calculator
Addition of 5 + 3 = 8
Subtraction of 5 - 3 = 2
Multiplication of 5 * 3 = 15
Division of 5 / 3 = 1.6666666666666667
```



2) WAP in Java to show add, subtract, multiply & divide operations

```
class Calculator {
    public static void main (String arg[]) {
        double c = 5.0/3.0;
        System.out.println("Addition of 5+3 = "
                + (5+3));
        System.out.println("Subtraction of 5-3 = "
                + (5-3));
        System.out.println("Multiplication of 5*3 = "
                + (5*3));
        System.out.println("Division of 5/3 = "
                + (c));
    }
}
```

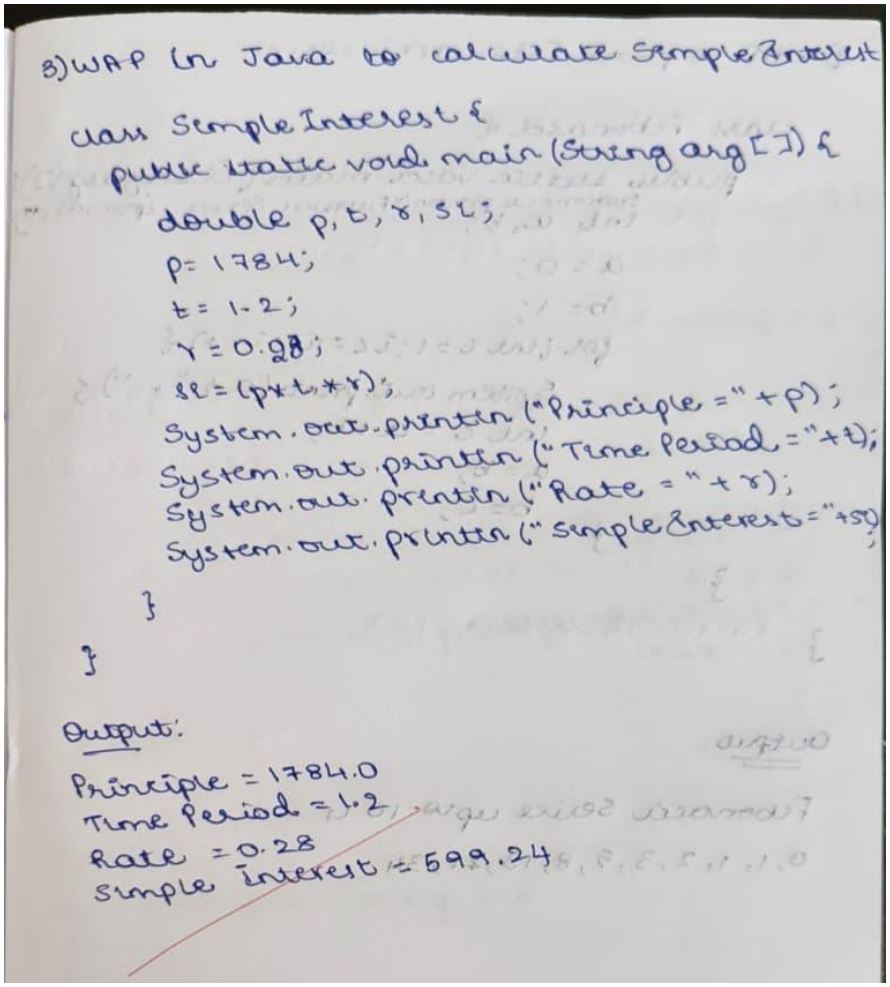
Output:

Addition of 5+3 = 8
Subtraction of 5-3 = 2
Multiplication of 5*3 = 15
Division of 5/3 = 1.6666666667

3. Write a Java program to calculate simple interest.

```
class SimpleInterest {
        public static void main (String arg[]) {
                double p, t, r, si;
                p = 1784;
                t = 1.2;
                r = 0.28;
                si = (p*t*r);
                System.out.println("Principle Amount = " + p);
                System.out.println("Time Period = " + t);
                System.out.println("Rate of Interest = " + r);
                System.out.println("Simple Interest = " + si);
        }
}
```

```
PS C:\Users\Sudhanva S M\Documents\Java> javac SimpleInterest.java
PS C:\Users\Sudhanva S M\Documents\Java> java SimpleInterest
Principle Amount = 1784.0
Time Period = 1.2
Rate of Interest = 0.28
Simple Interest = 599.424
```



3) WAP in Java to calculate Simple Interest

```
class SimpleInterest {
  public static void main (String arg[]) {
    double p, t, r, si;
    p = 1784;
    t = 1.2;
    r = 0.28;
    si = (p*t*r);
    System.out.println("Principle =" + p);
    System.out.println("Time Period =" + t);
    System.out.println("Rate = " + r);
    System.out.println("Simple Interest =" + si);
  }
}
```

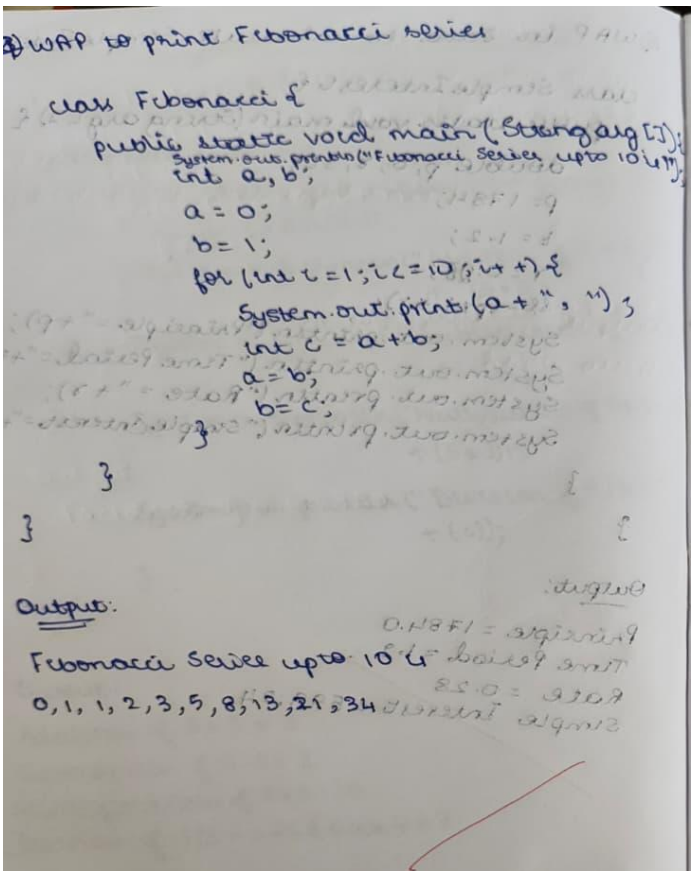
Output:

```
Principle = 1784.0
Time Period = 1.2
Rate = 0.28
Simple Interest = 599.24
```

4. Write a Java program to generate Fibonacci series.

```
class Fibonacci {
    public static void main (String arg[]) {
        int a = 0, b = 1, c;
        System.out.println("Fibonacci Series upto 10 is");
        for (int i = 1; i <= 10; i++) {
            System.out.print(a + " ");
            int c = a + b;
            a = b;
            b = c;
        }
    }
}
```

```
PS C:\Users\Sudhanva S M\Documents\Java> javac Fibonacci.java
PS C:\Users\Sudhanva S M\Documents\Java> java Fibonacci
Fibonacci Series upto 10 is
0 1 1 2 3 5 8 13 21 34
```



5. Write a Java program to print multiplication table of 3 and 5

```
class MultiplicationTable {
    public static void main(String arg[]) {
        System.out.println("Multiplication Table of 3 is");
        for (int i = 1; i <= 10; i++) {
            System.out.println(3 + " * " + i + " = " + (3*i));
        }
        System.out.println("\nMultiplication Table of 5 is");
        for (int i = 1; i <= 10; i++) {
            System.out.println(5 + " * " + i + " = " + (5*i));
        }
    }
}
```

```
PS C:\Users\Sudhanva S M\Documents\Java> javac MultiplicationTable.java
PS C:\Users\Sudhanva S M\Documents\Java> java MultiplicationTable
Multiplication Table of 3 is
3 * 1 = 3
3 * 2 = 6
3 * 3 = 9
3 * 4 = 12
3 * 5 = 15
3 * 6 = 18
3 * 7 = 21
3 * 8 = 24
3 * 9 = 27
3 * 10 = 30

Multiplication Table of 5 is
5 * 1 = 5
5 * 2 = 10
5 * 3 = 15
5 * 4 = 20
5 * 5 = 25
5 * 6 = 30
5 * 7 = 35
5 * 8 = 40
5 * 9 = 45
5 * 10 = 50
```

5) WAP to print multiplication tables of 3 & 5.

```
class Multiplication {
    public static void main (String arg[]) {
        int n1 = 3;
        int n = 5;
        System.out.println("Multiplication table of 3 is ");
        for (int i = 1; i <= 10; i++) {
            System.out.println(n1 + "*" + i + "=" + (n1*i));
        }
        System.out.println("Multiplication table of 5 is");
        for (int i = 1; i <= 10; i++) {
            System.out.println(n2 + "*" + i + "=" + (n2*i));
        }
    }
}
```

Output:

Multiplication table of 3 is

3 x 1 = 3
3 x 2 = 6
3 x 3 = 9
3 x 4 = 12
3 x 5 = 15
3 x 6 = 18
3 x 7 = 21
3 x 8 = 24
3 x 9 = 27
3 x 10 = 30

Multiplication table of 4 is

5x1 = 5	5x5 = 25	5x9 = 45
5x2 = 10	5x6 = 30	5x10 = 50
5x3 = 15	5x7 = 35	
5x4 = 20	5x8 = 40	

6. Write a Java program to print factorial of a given number.

```
class Factorial {
    public static void main (String arg[]){
        int factorial = 1;
        for (int i=1; i<=6; i++){
            factorial*=i;
        }
        System.out.println("Factorial of 6 is: " + factorial);
    }
}
```

```
PS C:\Users\Sudhanva S M\Documents\Java> javac Factorial.java
PS C:\Users\Sudhanva S M\Documents\Java> java Factorial
Factorial of 6 is: 720
```