# Lab - 1

1. Write a program to print "Hello world"
2. Write a program to add, Subtract, Multiply and divide 2 numbers
3. Write a program to find $n^{th}$ Fibonacci number
4. Write a program to find a given number is prime or not

1) Hello World

```
class Example {
    public static void main(String args[]) {
        System.out.println("Hello World");
    }
}
```

Output: Hello world

2) Addition, Sub, Mult, division

```
class Arithmetic {
  int a;
  int b;

  void set_value(int x, int y) {
      a = x;
      b = y;
  }

  void Addition() {
      System.out.println(a+b);
  }
  void Subtraction() {
      System.out.println(a-b);
  }
  void Multiplication() {
      System.out.println(a*b);
  }
  void Division() {
      System.out.println(a/b);
  }
```

```
class Example{

    public static void main(String args[]){
    Arithmetic ai = new Arithmetic();
      ai.set_value(2,2);
      ai.Addition();
      ai.Subtraction();
      ai.Multiplication();
      ai.Division();
    }
}
```

output: 4, 0, 4, 1

③ Fibonacci series

```
public class FibonacciSeries{
    public static void main(String args[]){
    int n=10;
    int firstTerm=0, secondTerm=1;

    for(int i=1; i<=n; i++){
      System.out.println(firstTerm+", ");

    int nextTerm = firstTerm + secondTerm;
    firstTerm = secondTerm;
    secondTerm = nextTerm;
    }
  }
}
```

Output: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34

(12) Prime

```
public class PrimeNumbers {
    public static void main(String args[]){
        for(int i=2; i<=11; i++){
            if(isPrime(i)){
                System.out.print(i+" ");
            }
        }
    }

public static boolean isPrime(int number){
    if(number<=1){
        return false;
    }

for(int i=2; i<=Math.sqrt(number); i++){
        if(number%i==0){
            return false;
        }
    }
    return true;
    }
}
```

Output: 2 3 5 7

(2)

```
impoet java.util Scanner;

class Grocery{
    double dal, pulse, sugar;
    Grocery()
{
    dal = 1;
    pulse = 1;
    sugar = 0.5;
}
Grocery (double d, double p, double s)
{
 dal = d;
pulse = p;
sugar = s;
}
Grocery(double one)
{
 dal = one
 pulse = one;
sugar = one;
}
Grocery(Grocery copy)
{
  dal = copy.dal;
pulse = copy.pulse;
sugar = copy.sugar)
```

```
void total(){
  System.out.println("Total = " + (qty_dal*50) +
                     (qty_pulses*80) + (qty_sugar*40));
}

class Run
{
    public static main void(String args[]){
      Scanner SI = new Scanner(System.in);
       grocery g1 = new grocery();
        g1.total();
       System.out.println("Enter value for
            all grocery");
      double a = SC.nextDouble();
       grocery g2 = new grocery(a);
        g2.total();
       grocery g3 = new grocery(10,20,30);
         g3.total();
       grocery g4 = new grocery(g3);
         g4.total();
    }
}
```

Total = 155
Enter the values 10
Total = 1800.0
Total = 3600.0
Total = 3600.0