Program 1

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

Program 2

```
class prime_num
{
public static void main(String [ ]args)
int number = 12;
boolean isPrime = true;
  if (number <=1) {
    isPrime = false;
  }else {
  for (int i = 2; i < number ; i++){
    if (number % i ==0) {
      isPrime = false;
      break;
    }
  }
}
if (isPrime ) {
  System.out.Println(number+ " is a prime number");
}
else {
  System.out.Println(number+ " is not a prime number");
  }
} }
```

Program 3

```
class fibonacci_series {
    public static void main (String [] args) {
        int n = 10;

        if (args.length > 0) {
            n = Integer.parseInt (args [0]);

        int a = 0, b = 1;
        System.out.println ("Fibonacci Series: ");
        for (int i = 0; i < n; i++) {
            System.out.println (a);
            int next = a+b;
            a = b;
            b = next;
        }
    }
}
```

Program 4.

```
class TriangleType
    public static void main (String [] args) {

    double a = 3;
    double b = 4;
    double c = 5;

    if (a <= 0 || b <= 0 || c <= 0) {
        System.out.println ("Side lengths must be positive.");
        return;
    }
    String type
    if (a == b && b == c) {
        type = "equilateral";
    } else if (a == b || b == c || a == c) {
        type = "isosceles";
    } else {
        type = "scalene";
    }
```

```
System.out.println("The triangle with sides "+a+", "+b+", and
+c+" is "+type+".");
    }
}
```

Program 5

```
Class SimpleInterest {
    public static void main (String [] args){

    double principal = 1000;
    double rate = 5;
    double time = 3;

    double interest = (principal * rate * time) / 100;

    System.out.println("Simple Interest: " + interest);
    }
}
```

Program 6

```
Class SwapNum {
    public static void main (String [] args) {

    int a = 5;
    int b = 10;

    System.out.println("Before Swapping: a = "+a+", b = "+b);

    int temp = a;
    a = b;
    b = temp;

    System.out.println("After Swapping: a = "+a+", b = "+b);
    }
}
```