FULL STACK DEVELOPMENT – WORKSHEET 2

1. C. Java method overloading implements the OOPS concept is Polymorphism

In Java, method overloading allows us to have multiple methods with the same name but with different argument lists. This is a static polymorphism (compile-time polymorphism).

2. B. Data members and member functions of a class are private by default is False

3. D. functions can be inherited from the base class is - None

Because static classes are sealed and therefore cannot be inherited. And constructors cannot be inherited in Java.

4.C. Inheritance is used to reduce the use of nested classes.

5.A.Encapsulation concept of Java is achieved by combining methods and attributes into a class.

6. A. Which of the following declarations does not compile?

double num1, int num2 = 0; does not compile because it is not valid syntax to declare two variables with different types on the same line.

7.A.Set interface must contain a unique element.

8.C. Because there is no any Package with name main so it's a compile error.

9.A.BINGO

10.A.Compilation Error. Unresolved compilation problem:y cannot be resolved to a variable.

11.A. String(chars) is a constructor of class string, it initializes string s with the values stored in character array chars, therefore s contains **abc.**

12. D. Compilation Error .The type B cannot subclass the final class A.

Final classes cannot be extended or inherited and method Display() is undefined.

13. B. 0 but here is error: method getData() is already defined in class Test.

14.A.[2 5]

15. C.False true

You should not use == (equality operator) to compare these strings because they compare the reference of the string that's why ((john==jon) is false

For string compare we only use Equals()method (john.equals(jon)) is true

16. A. Three reference variables and two objects are created.

- there are three reference variables and two objects.
- The student Name, studentId, and stud_class are the three reference variables.
- The objects are those variables that are created using the new operator, i.e., studentName and stud_class.
- The studentId is only a reference variable as it is not declared using the new operator.

17.Finf Even And Odd Number Program:

```
import java.util.Scanner;
public class EvenAndOddprogram {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter a number: ");
        int num = sc.nextInt();
        if (num % 2 == 0)
            System.out.println(num + " is even");
        else
            System.out.println(num + " is odd");
    }
}
```

18.Average of Two Numbers:

```
import java.util.Scanner;
public class average {
    public static void main(String[] args) {
        int n1, n2;
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter number 1: ");
```

```
        n1 = sc.nextInt();
        System.out.println("Enter number 2: ");
        n2 = sc.nextInt();
        float avg = (n1 + n2) / 2;
System.out.println("Average of (" + n1 + " + " + n2 + ") / 2 = "
+ avg);
    }
}
```

19.Swap Program

```
public class Swap {
    public static void main(String[] args) {
        int a = 1, b = 2;
        System.out.println("--Before swap--");
        System.out.println("First number = " + a);
        System.out.println("Second number = " + b);
        int temp = a;
        a = b;
        b = temp;
        System.out.println("--After swap--");
        System.out.println("First number = " + a);
        System.out.println("Second number = " + b);
    }}
```

20.PrimeNumber Program:

```
class PrimeNumber {
   public static void main(String args[]) {
      int i, m = 0, flag = 0;
      int n = 2;// it is the number to be checked
      m = n / 2;
      if (n == 0 || n == 1) {
         System.out.println(n + " is not prime number");
      } else {
         for (i = 2; i <= m; i++) {
            if (n % i == 0) {
               System.out.println(n + " is not prime number");
               flag = 1;
               break;
            }
         }
         if (flag == 0) {
            System.out.println(n + " is prime number");
         }
      } // end of else
   }}
```

21.Find Table of n Number

```
import java.util.Scanner;
 public class TableOfNumber
{
    public static void main(String args[]){
        int number, i, table;
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter a Number : ");
        n = scan.nextInt();
        System.out.print("Table of " + n + " is\n");
        for(i=1; i<=10; i++){
            table = n*i;
            System.out.print(n + " * " + i + " = " + table + "\n");
        }
    }
}
```

22. Find Largest between three Number

```
    public class LargestNumber3
    {
    public static void main(String[] args)
    {
```

```
int a=40, b=78, c=19;
if(a>=b && a>=c)
System.out.println(a+" is the largest Number");
else if (b>=a && b>=c)
System.out.println(b+" is the largest Number");
else
System.out.println(c+" is the largest number");
  }
}
```

23. Find Simple Interest Program

```
public class simpleinterest {
   public static void main(String args[]) {
   float p, r, t, si; // principal amount, rate, time and simple interest respectively
      p = 13000;
      r = 12;
      t = 2;
      si = (p * r * t) / 100;
      System.out.println("Simple Interest is: " + si);
   }}
```

24.Find Area and Perimeter of Rectangle Program

```
import java.util.Scanner;
public class AreanPerimeterRectangle {
   public static void main(String[] args) {
      int l, w, perimeter, area;
      Scanner sc = new Scanner(System.in);
      System.out.print("Enter length of rectangle:");
      l = sc.nextInt();
      System.out.print("Enter width of rectangle:");
      w = sc.nextInt();
      perimeter = 2 * (l + w);
      System.out.println("Perimeter of rectangle:" +
perimeter);
      area = l * w;
      System.out.println("Area of rectangle:" + area);
   }
}
```

25.Find Vowel or consonant Program.

```
import java.util.Scanner;
public class VowelConsonant {
   public static void main(String[] args) {
```

```
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter a character : ");
        char ch = sc.next().charAt(0);
        if (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch =='u')
           System.out.println(ch + " is vowel");
        else
           System.out.println(ch + " is consonant");
    }
}
```