

FULL STACK DEVELOPMENT – WORKSHEET 2

Q1 to Q7 are multiple choice questions having one correct answer only.

Q1.Java method overloading implements the OOPS concept

1. **Encapsulation**
2. **Inheritance**
3. **Polymorphism**
4. **Abstraction**

**Ans. C**

Q2.Data members and member functions of a class are private by default.

1. **True**
2. **False**
3. **Depend on code**
4. **None**

Ans. B

Q3.Which of the following functions can be inherited from the base class?

1. **Constructor**
2. **Static**
3. **All**
4. **None**

Ans. D

Q4. Identify the feature, which is used to reduce the use of nested classes.

1. **Binding**
2. **Abstraction**
3. **Inheritance**
4. **None**

Ans. C

Q5. Which concept of Java is achieved by combining methods and attributes into a class?

1. **Encapsulation**
2. **Inheritance**
3. **Polymorphism**
4. **Abstraction**

**Ans. A**

Q6.Which of the following declarations does not compile?

1. **double num1, int num2 = 0;**
2. **int num1, num2;**
3. **int num1, num2 = 0;**
4. **int num1 = 0, num2 = 0;**

Ans. A

Because it is not valid syntax to declare two variables with different types on the same line

Q7.Which of these interface must contain a unique element?

1. **Set**
2. **List**
3. **Array**
4. **collection**

Ans. A

Set interface extends collection interface to handle sets, which must contain unique elements.

Q8 to Q16 you have to find output and give explanation where needed. Q8.Predict the output?

package main; class T {

int t = 20;

**}**

class Main {

public static void main(String args[]) { T t1 = new T(); System.out.println(t1.t);

**}**

**}**

1. **20**
2. **0**
3. **COMPILE ERROR**

**Ans .A**

**Q9. What is the output of the below Java program?**

//bingo.java file public class Hello

**{**

public static void main(String[] args)

**{**

System.out.println("BINGO");

**}**

**}**

1. **BINGO**
2. **bingo**
3. **0**
4. **Compile Error**

Ans. A

Q10.What will be the output of the following Java program? class variable\_scope

**{**

public static void main(String args[])

**{**

int x; x = 5;

**{**

int y = 6;

System.out.print(x + " " + y);

**}**

System.out.println(x + " " + y);

**}**

**}**

1. **Compilation Error**
2. **Runtime Error**
3. **5 6 5 6**
4. **5 6 5**

**Ans.A**

Compile time error because of {}tokens used to put value of y

Without these token output would be 5 65 6

Q11.What will be the output of the following Java code?

class String\_demo

**{**

public static void main(String args[])

**{**

char chars[] = {'a', 'b', 'c'}; String s = new String(chars); System.out.println(s);

**}**

**}**

1. **abc**
2. **a**
3. **b**
4. **c**

Ans. A – abc

However class String\_demo needs to be public

Q12. What will be the output of the following Java program? final class A

**{**

int i;

**}**

class B extends A

**{**

int j;

System.out.println(j + " " + i);

**}**

class inheritance

**{**

public static void main(String args[])

**{**

B obj = new B(); obj.display();

**}**

**}**

1. **2 2**
2. **3 3**
3. **Runtime Error**
4. **Compilation Error**

Ans. Compile error

Display method is not defined in class B

Q13.What is output of following program public class Test

**{**

public int getData() //getdata() 1

**{**

return 0;

**}**

public long getData() //getdata 2

**{**

return 1;

**}**

public static void main(String[] args)

**{**

Test obj = new Test(); System.out.println(obj.getData());

**}**

**}**

1. **1**
2. **0**
3. **Runtime Error**
4. **Compilation Error**

**Ans. D- Both getdata 1 and getdata 2 only differ in return types and NOT signatures.**

Q14. What is the output of the following program? public class Test{

static int start = 2; final int end; public Test(int x) {

x = 4;

end = x;

**}**

public void fly(int distance) { System.out.println(end-start+" "); System.out.println(distance);

**}**

public static void main(String []args){ new Test(10).fly(5);

**}**

**}**

1. **[2 5]**
2. **[0 0]**
3. **[5 2]**
4. **[0 2]**

Ans . A

Q15.What is the output of the following program? String john = "john";

String jon = new String(john); System.out.println((john==jon) + " "+ (john.equals(jon)));

1. **true true**
2. **true false**
3. **false true**
4. **false false**

**Ans. C**

Q16. Given that Student is a class, how many reference variables and objects are created by the following code?

Student studentName, studentId; studentName = new Student(); Student stud\_class = new Student();

1. **Three reference variables and two objects are created.**
2. **Two reference variables and two objects are created.**
3. **One reference variable and two objects are created.**
4. **Three reference variables and three objects are created.**

Ans. A

Q17 to Q25 are simple java programs to write.

Q17. Write a java program to check even or odd number

import java.util.Scanner;

public class EvenOddNum {

    public static void main (String[]args)

    {

        Scanner sc = new Scanner(System.in);

        System.out.println("type a number of your choice");

        int number = sc.nextInt();

        if (number % 2 == 0)

            {

                System.out.println(number + " is a even number");

            }

        else {

            System.out.println(number + " is a odd number");

            }

    }

}

Q18. Write a java program to find average of two numbers

import java.util.Scanner;

public class AverageTwoNum {

    public static void main (String[]args) {

        Scanner sc = new Scanner(System.in);

        System.out.println("type first number");

        int num1 = sc.nextInt();

        System.out.println("type second number");

        int num2 = sc.nextInt();

        System.out.println("Average of given numbers is: " + ((num1+num2)/2));

    }

}

Q19. Write a java program to swap two numbers

import java.util.Scanner;

public class SwapTwoNum {

    public static void main (String[]args) {

        Scanner sc = new Scanner(System.in);

        System.out.println("type value for num1");

        int num1 = sc.nextInt();

        System.out.println("type value for num2");

        int num2 = sc.nextInt();

        int temp;

        temp = num1;

        num1 = num2;

        num2 = temp;

        System.out.println("after swapping, value of num1 is "+ num1 + " and num2 is "+num2);

    }

}

Q20. Write a java program to check whether a number is prime or not

import java.util.Scanner;

public class PrimeOrNot

{

    public static void main (String[]args)

    {

        Scanner sc = new Scanner(System.in);

        System.out.println("type a number of your choice");

        int num = sc.nextInt();

        boolean result= false;

        if ((num == 0)||(num==1))

            {

                System.out.println(num + " is not a  prime number");

            }

        int f= 0;

        for (int i = 2; i<= num; i++)

            {

                if (num % i == 0)

                {

                    f++;

                }

            }

        if (f>1)

            {

                System.out.println(num + " is not a  prime number");

            }

        else

            {

                System.out.println(num + " is  a prime number");

            }

    }

}

Q21. Write a java program to find table of n

import java.util.Scanner;

public class MultiplicationTable

{

    public static void main (String[]args)

    {

        Scanner sc = new Scanner(System.in);

        System.out.println("Type a number to generate its Multiplication Table");

        int num = sc.nextInt();

        System.out.println("Multiplication table of "+num+ " is as follows:");

        for(int i = 1; i<=10; i++)

        {

            System.out.println(num + " \* "+i + " = "+ (num\*i));

        }

    }

}

Q22. Write a java program to find the largest of three numbers.

import java.util.Scanner;

public class LargestOfThreeNum

{

    public static void main (String[]args)

    {

        Scanner sc = new Scanner(System.in);

        System.out.println("type value for num1");

        int num1 = sc.nextInt();

        System.out.println("type value for num2");

        int num2 = sc.nextInt();

        System.out.println("type value for num3");

        int num3 = sc.nextInt();

        if((num1>num2)&&(num1>num3))

        {

            System.out.println(num1 +" is the largest among given numbers");

        }

        else if((num2>num3)&&(num2>num3))

        {

            System.out.println(num2 +" is the largest among given numbers");

        }

        else{

            System.out.println(num3 +" is the largest among given numbers");

        }

    }

}

Q23. Write a java program to calculate Simple Interest

class Bank{

    int principal;

    int period;

    int rate;

    public int getPrincipal()

    {

        return principal;

    }

    public void setPrincipal(int principal)

    {

        this.principal = principal;

    }

    public int getRate()

    {

        return rate;

    }

    public void setRate(int rate)

    {

        this.rate = rate;

    }

    public int getPeriod()

    {

        return period;

    }

    public void setPeriod(int period)

    {

        this.period = period;

    }

    int simpleInterest()

    {

        return ((principal\*rate\*period)/100);

    }

}

class SimpleInterest

{

    public static void main(String[] args)

    {

        Bank obj = new Bank();

        obj.setPrincipal(5000);

        System.out.println("The Principal amount "+ obj.getPrincipal());

        obj.setRate(8);

        System.out.println("The rate of interest is "+ obj.getRate());

        obj.setPeriod(20);

        System.out.println("The period of loan is "+ obj.getPeriod());

        System.out.println("The Simple Interest  is "+ obj.simpleInterest());

    }

}

Q24. Write a java program to calculate Area and perimeter of Rectangle

class Rectangle{

    int length;

    int breadth;

    public int getBreadth(){

        return breadth;

    }

    public void setBreadth(int breadth){

        this.breadth = breadth;

    }

    public int getLength() {

        return length;

    }

    public void setlength(int length) {

        this.length = length;

    }

    int area(){

        return length\*breadth;

    }

    int perimeter(){

        return 2\*(length+breadth);

    }

}

class AreaPerimeterRectangle

{

    public static void main(String[] args) {

        Rectangle obj = new Rectangle();

        obj.setlength(5);

        System.out.println("the length of rectangle is "+ obj.getLength());

        obj.setBreadth(8);

        System.out.println("the breadth of rectangle is "+ obj.getBreadth());

        System.out.println("the area of rectangle is "+ obj.area());

        System.out.println("the perimeter of rectangle is "+ obj.perimeter());

    }

}

Q25. Write a java program to check whether character is vowel or consonant

import java.util.Scanner;

public class VowelConsonent

{

    public static void main (String[]args)

    {

        Scanner sc = new Scanner(System.in);

        System.out.println("Type a alphabet of your choice");

        char ch = sc.next().charAt(0);

        switch (ch)

        {

            case 'a':

            case 'e':

            case 'i':

            case 'o':

            case 'u':

                System.out.println(ch + " is vowel");

                break;

            default:

                System.out.println(ch + " is consonant");

        }

    }

}