FULL STACK DEVELOPMENT – WORKSHEET -A

Ng Haridhwaj Singh

FSG0123

Ques 1. Write a java program Add two Numbers.

Ans:

```java
public class AddTwoNumb
    // This line declares a public class named AddTwoNumb

    public static void main String   args
        // This line defines the use of the main method from which we start
the Java
        // program

        int x   10;
        // This line declares an integer variable x and assigns the value 10

        int y   20;
        // This line declares an integer variable y and assigns the value 20

        int sum   x   y;
        // This line calculates the sum of the variables x and y

        System out println sum ;
        // This line prints the value of the variable sum, which in this case
will print
        // 30 (the sum of x=10 and y=20)
```

Ques 2. Write a java program Check Whether a Number is Even or Odd

Ans:

```java
import java.util.Scanner;

public class CheckOddEven
    public static void main(String[] args)
        Scanner reader = new Scanner(System.in);
        // scanner object is created to take input from the user
        System.out.print("Enter a number: ");
        // accepts the number from the user to store in the variable
        int num = reader.nextInt();
        // checks the input number is even or odd using the modulo operator
        if(num % 2 == 0)
            // if the remainder is 0 then the number is even
            System.out.println(num + " is even.");
        else
            // else, the number is odd
            System.out.println(num + " is odd.");

        reader.close();
        // closes the scanner object to release the system resources
```

Ques 3. Write a java program Check if a given number is palindrome or not.

Ans:

```java
class PalindromeExample
    public static void main String args
        int r, sum   0, temp;
        // declared variables

        int n    454;
        // Initialized the number

        temp    n;
        // Stored the original number in a temporary variable

        // Reversed the number using a while loop
        while  n    0
            r   n    10; // getting remainder
            // Added the extracted digit to the reversed number, multiplying
the current reversed number by 10 and then adding the digit
            sum    sum    10    r;
            // Remove the last digit from the number
            n    n    10;


        // used if ...else statement to check if the reversed number is equal
to the original number
        if  temp    sum
            System out println "palindrome number" ;
        else
            System out println "not palindrome" ;
```

Ques 4. Write a java program to find the sum of n natural numbers.

Ans:

```java
import java.util.Scanner;

public class SumOfNaturalNumbers
    public static void main(String[] args)
        // This line defines the use of the main method from which we start the Java
        // program
        Scanner scanner = new Scanner(System.in);
        // Scanner object is created to take input from the user

        System.out.print("Enter the value of 'n': ");
        // Prompts the user to enter the value of 'n'
        int n = scanner.nextInt();
        // Read the value of 'n' entered by the user and stores it in a
        variable

        int sum = findSumOfNaturalNumbers(n);
        // Calculates the sum of the first 'n' natural numbers using the
        function
        // findSumOfNaturalNumbers

        System.out.println("The sum of the first " + n + " natural numbers is: " + sum);
        // Displays the result, the sum of the first 'n' natural numbers, to
        the user

        scanner.close();
        // It releases the system resources by closing the scanner


    public static int findSumOfNaturalNumbers(int n)
        // This is the function to find the sum of the first 'n' natural
        numbers
        return n * (n + 1) / 2;
        // Uses the correct formula for the sum of the first 'n' natural
        numbers: sum =
        // n * (n + 1) / 2
```

Ques 5. Write a java program to Check Prime Number or not.

Ans:

```java
import java util Scanner;

public class CheckIfNumberIsPrime
    public static void main String   args
        Scanner scanner   new Scanner System in ;
        // Creates a scanner object to take input from the user

        System out print "Enter a number: " ;
        // Requests the user to enter a number
        int num   scanner nextInt   ;
        // Reads the number from the user and stores it in a variable

        if  isPrime num
            // Checks if the number is prime
            System out println num   " is a prime number." ;
            // Prints the message if the number is prime
          else
            System out println num   " is not a prime number." ;
            // Prints the message if the number is not prime


        scanner close  ;
        // Closes the scanner object to release system resources


    public static boolean isPrime int num
        // It is a function to check if the number is prime
        if  num    1
            // Prime numbers are greater than 1
            return false;


        for  int i   2; i   Math sqrt num ; i
            if  num   i   0
                // Checks for divisibility from 2 to the square root of the
number
                return false;



        // It is a prime number if the number is not divisible by any number
in the
        // range
        return true;
```