1. Write a Java program to print the sum, divide, product of two numbers.

■ Code and Output:

```
import java.util.*;
public class FirstProgram {
    public static void main(String[] args)
    {
        Scanner input = new Scanner(System.in);
        int a,b;
        a = input.nextInt();
        b = input.nextInt();
                                             mohiuddin-murad...
                                                                           Q
        int sum,product;
                                            /a Basic Code$ javac FirstProgram.ja
        double divide;
        sum=a+b;
                                           mohiuddin-murad@Murad:~/Downloads/Ja
        divide=a/b;
                                           va Basic Code$ java FirstProgram
        product=a*b;
                                           5 4
        System.out.println(sum);
                                          1.0020
        System.out.printf("%.2f",divide);
                                           mohiuddin-murad@Murad:~/Dowmmmommmm
        System.out.println(product);
                                           mohiuddin-murad@Murad:~/Downloads/Ja
                                            a Basic Code$
    }
}
```

2. Write a Java program to print the area and perimeter of a circle.

```
import java.util.*;
public class SecondProgram {
    public static void main(String[] args)
        Scanner input = new Scanner(System.in);
        int r;
        r = input.nextInt();
                                             mohiuddin-murad...
                                                                           a
        double pi = 3.1416;
        double area, perimeter;
                                           mohiuddin-murad@Murad:~/Downloads/Ja
        area=pi*r;
                                            va Basic Code$ java SecondProgram
        perimeter = 2*pi*r;
        System.out.println(area);
                                           15.708
        System.out.println(perimeter);
                                           mohiuddin-murad@Murad:~/Downloads/Ja
    }
                                           mohiuddin-murad@Murad:~/Downloads/Ja
}
                                              Basic Code$
```

3. Write a Java program to swap two variables without using third variable.

■ Code and Output:

```
import java.util.*;
public class ThirdProgram {
    public static void main(String[] args)
        Scanner input = new Scanner(System.in);
       int a,b;
        a = input.nextInt();
                                              mohiuddin-murad...
                                                                              Q
        b = input.nextInt();
        System.out.println(a);
                                            mohiuddin-murad@Murad:~/Downloads/Ja
        System.out.println(b);
                                             va Basic Code$ java ThirdProgram
        System.out.println(" ");
                                            5
                                            6
        a=a+b;
        b=a-b:
        a=a-b;
                                            mohiuddin-murad@Murad:~/Downloads/Ja
        System.out.println(a);
                                            va Basic Code$mohiuddin-murad@Murad:
        System.out.println(b);
                                            mohiuddin-murad@Murad:~/Downloads/Ja
    }
}
```

4. Write a Java program and compute the sum of the digits of an integer. (Such as: Input an integer: 45; Expected Output: The sum of the digits is: 9)

```
import java.util.*;
                                                                  mohiuddi...
                                                                              Q
                                                                                  •••
public class FourProgram {
                                                    rogram.java
                                                    mohiuddin-murad@Murad:~/Downloa
    public static void main(String[] args)
                                                    ds/Java Basic Code$ java FourPr
                                                   ogram
        Scanner input = new Scanner(System.in);
                                                   Input an integer:
                                                   5 6
        int a,b;
                                                   The sum of the digits is:11
        System.out.println("Input an integer:");
                                                   mohiuddin-murad@Murad:~/Downloa
        a = input.nextInt();
                                                   mohiuddin-murad@Murad:~/Downloa
        b = input.nextInt();
                                                    ds/Java Basic Code$
        int sum=0;
        sum=a+b;
        System.out.println("The sum of the digits is:"+sum);
    }
}
```

5. Write a Java program to reverse a number.

■ Code and Output:

```
import java.util.*;
class Reverse{
   int rever(int n)
                                                            mohiuddin-murad@Murad: ~/Do...
       int rem,rev = 0;
                                           mohiuddin-murad@Murad:~/Downloads/Java Basic C
      while(n>0){
                                           ode$ javac FiveProgram.java
          rem = n%10;
                                          mohiuddin-murad@Murad:~/Downloads/Java Basic C
          rev=(rev*10)+rem;
                                           ode$ java FiveProgram
          n=n/10;
                                          12345
                                          Reverse Number is54321
      return rev;
   }
                                          mohiuddin-murad@Murad:~/Downloads/Java Basic m
                                          mohiuddin-murad@Murad:~/Downloads/Java Basic
public class FiveProgram {
                                           ode$
   public static void main(String[] args)
   {
       Scanner input = new Scanner(System.in);
      int n;
      n=input.nextInt();
      Reverse ob = new Reverse();
      System.out.println("Reverse Number is"+ob.rever(n));
   }
}
```

7. Write a Java program to input and display your password.

```
import java.util.*;
                                                                   mohiuddin-m...
                                                                                 Q
                                                     mohiuddin-murad@Murad:~/Downloads
public class SevenProgram {
                                                     Java Basic Code$ java SevenProgr
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
                                                    Enter your password: 12345
                                                    Your password is: 12345
        System.out.print("Enter your password: "); mohiuddin-murad@Murad:~/Downloads
        String password;
                                                     Java Basic Code$
        password = input.nextLine();
        System.out.println("Your password is: " + password);
    }
}
```

6. Write a Java program to count the letters, spaces, numbers and other characters of an input string.

```
import java.util.*;
public class SixProgram {
    public static void main(String[] args)
       Scanner input = new Scanner(System.in);
       String s;
       s = input.nextLine();
       int letters = 0:
       int digit=0,space=0,ch=0;
                                                                                              mohiuddin-murad@Murad: ~/...
                                                                                                                                 Q
        for(int i=0;i<s.length();i++)</pre>
                                                                           Code$ javac SixProgram.java
           if(s.charAt(i)>=48 && s.charAt(i)<=57){</pre>
                                                                          mohiuddin-murad@Murad:~/Downloads/Java Basic
               digit++;
                                                                           Code$ java SixProgram
           else if(s.charAt(i)==32)
                                                                          Abc 123 @*(
                                                                          Count off letters: 3
               space++;
                                                                          Count off spaces: 2
                                                                          Count off numbers: 3
           else if(s.charAt(i)>=65 && s.charAt(i)<=90){</pre>
                                                                          Count off characters: 3
               letters++:
                                                                          mohiuddin-murad@Murad:~/Downloads/Java Basic
mohiuddin-murad@Murad:~/Downloads/Java Basic
           else if(s.charAt(i)>=97 && s.charAt(i)<=122)</pre>
               letters++:
           else if(s.charAt(i)>=33 && s.charAt(i)<=47){</pre>
           else if(s.charAt(i)>=58 && s.charAt(i)<=64){</pre>
           else if(s.charAt(i)>=91 && s.charAt(i)<=96){</pre>
           else if(s.charAt(i)>=123 && s.charAt(i)<=126){</pre>
        System.out.println("Count off letters:"+" "+letters);
       System.out.println("Count off spaces:"+" "+space);
       System.out.println("Count off numbers:"+" "+digit);
        System.out.println("Count off characters:"+" "+ch);
```

8. Write a Java program to display the current date time in specific format.

■ Code and Output:

```
import java.util.*;

public class EightProgram {
    public static void main(String[] args) {
        Date DateTime = new Date();
        System.out.println("Current date and time: " + DateTime);
    }
}

mohiuddin-murad@Murad:~/Do... Q ...

ode$ java EightProgram
Current date and time: Fri Feb 09 18:30:40 BDT 2024
mohiuddin-murad@Murad:~/Downloads/Java Basic C
ode$ [
```

9.Write a Java program to print the odd numbers from 1 to 99. Prints one number per line

```
public class NineProgram {
    public static void main(String[] args)
    {
                                                 . .
                                                              mohiuddin-murad...
                                                                                q ...
        for(int i=1;i<100;i++)</pre>
                                                Basic Code$ java NineProgram
        {
                                                1 3 5 7 9 11 13 15 17 19 21 23 25 27
            if(i%2!=0)
                                                29 31 33 35 37 39 41 43 45 47 49 51
                                               53 55 57 59 61 63 65 67 69 71 73mohiu
                System.out.print(" "+i);;
                                               ddin-murad@Murad:~/Downloads/Java Bas
                                               c Code$mohiuddin-murad@Murad:~/Downl
            }
                                               mohiuddin-murad@Murad:~/Downloads/Jav
        }
                                               Basic Code$
}
```

10. Write a Java program to accept a number and check the number is even or not. Prints 1 if the number is even or 0 if the number is odd.

■ Code and Output:

```
import java.util.*;
public class TenProgram {
    public static void main(String[] args)
        Scanner input = new Scanner(System.in);
        int n;
        n = input.nextInt();
                                                 mohiuddin-m...
                                                                           Q
        if(n%2==0)
                                                Java Basic Code$ java TenProgram
        {
            System.out.println("1");
        }
                                               mohiuddin-murad@Murad:~/Downloads
        else
                                               /Java Basic Code$ java TenProgram
        {
                                               3
            System.out.println("0");
                                               mohiuddin-murad@Murad:~/Downloads
    }
}
```

11. Write a Java program to reverse a word.

```
import java.util.*;
public class ElevenProgram {
                                                                mohiuddi...
                                                                            Q ...
    public static void main(String[] args) {
                                                  ds/Java Basic Code$ java Eleven
        Scanner input = new Scanner(System.in);
                                                 Program
        String s = input.nextLine();
                                                 Murad
                                                 daruM
        String rev = Reverse(s);
                                                  mohiuddin-murad@Murad:~/Downloa
                                                  mohiuddin-murad@Murad:~/Downloa
        System.out.println(rev);
                                                   s/Java Basic Code$
    }
        public static String Reverse(String s) {
        StringBuilder rev = new StringBuilder();
        for (int i = s.length() - 1; i >= 0; i--) {
            rev.append(s.charAt(i));
        return rev.toString();
    }
}
```

12. Write a Java program to compute the sum of the first 100 prime numbers.

■ Code and Output:

```
public class TwelveProgram {
    public static void main(String[] args) {
       int count = 0;
       long sum = 0;
       int number = 2;
                                                            mohi...
                                                                                     Q
       while (count < 100) {
           if (isPrime(number)) {
                                                          mohiuddin-murad@Murad:~/Down
               sum += number;
                                                           loads/Java Basic Code$ java
               count++;
                                                          TwelveProgram
                                                          24133
           number++;
                                                          mohiuddin-murad@Murad:~/Dowm
       }
                                                          mohiuddin-murad@Murad:~/Down
       System.out.println(sum);
                                                           .oads/Java Basic Code$
   public static boolean isPrime(int num) {
       if (num <= 1) {
           return false;
       for (int i = 2; i <= Math.sqrt(num); i++) {</pre>
           if (num % i == 0) {
               return false;
       return true;
   }
}
```

15. Write a Java Program to check if number is positive or negative.

```
Q
import java.util.*;
                                                   mohiuddin-murad@Murad:~/Downloads/Ja
                                                     Basic Code$ java FifteenProgram
public class FifteenProgram {
    public static void main(String[] args) {
                                                  The number is positive.
        Scanner input = new Scanner(System.in);
                                                  mohiuddin-murad@Murad:~/Downloads/Ja
                                                   /a Basic Code$ java FifteenProgram
        int num:
                                                   - 5
        num = input.nextInt();
                                                   The number is negative.
                                                   mohiuddin-murad@Murad:~/Downloads
        if (num > 0) {
            System.out.println("The number is positive.");
        } else if (num < 0) {</pre>
            System.out.println("The number is negative.");
        } else {
            System.out.println("The number is zero.");
        }
    }
}
```

13. Write a Java program to check if a positive number is a palindrome or not.

■ Code and Output:

```
import java.util.*;
public class ThirteenProgrem {
    public static void main(String[] args) {
       Scanner input = new Scanner(System.in);
        System.out.print("Enter a positive number: ");
       int num = input.nextInt();
        if (isPalindrome(num))
        {
           System.out.println(num + " is a palindrome number.");
        }
        else
        {
           System.out.println(num + " is not a palindrome number.");
                                                        mohiuddin-murad@...
                                                                                            Q
    public static boolean isPalindrome(int num) {
        int number = num;
                                                      mohiuddin-murad@Murad:~/Downloads/Java
       int rev = 0;
                                                       Basic Code$ java ThirteenProgrem
                                                      Enter a positive number: 101
        while (num != 0) {
                                                      101 is a palindrome number.
           int n = num % 10;
                                                      mohiuddin-murad@Murad:~/Downloads/Java
           rev = rev * 10 + n;
                                                       Basic Code$ java ThirteenProgrem
           num /= 10;
                                                      Enter a positive number: 123
        }
                                                      123 is not a palindrome number.
                                                       mohiuddin-murad@Murad:~/Downloads/Javm
        return number == rev;
    }
}
```

14. Write a Java Program to find the largest of three numbers using if-else.

```
public class FourteenProgram {
    public static void main(String[] args) {
       int num1 = 50;
                                                      mohiuddin-m...
                                                                                 Q
       int num2 = 200;
                                                     mohiuddin-murad@Murad:~/Downloads
       int num3 = 1;
                                                      Java Basic Code$ java FourteenPr
                                                     ogram
       if (num1 >= num2 && num1 >= num3) {
                                                     200
            System.out.println(num1);
                                                     mohiuddin-murad@Murad:~/Downloamm
       } else if (num2 >= num1 && num2 >= num3) {
                                                    mohiuddin-murad@Murad:~/Downloads
                                                     Java Basic Code$
            System.out.println(num2);
        } else {
            System.out.println(num3);
       }
   }
}
```

16. Write a Java Program to check whether a char is vowel or Consonant using Switch Case

■ Code and Output:

```
import java.util.*;
public class SixteenProgram {
   public static void main(String[] args) {
                                                   . .
                                                                  mohiuddin-mura...
                                                                                    Q
       Scanner input = new Scanner(System.in);
                                                  wa Basic Code$ java SixteenProgram
       ch = input.next().charAt(0);
       switch (ch) {
                                                 Character is a vowel.
          case 'a':
                                                 mohiuddin-murad@Murad:~/Downloads/J
           case 'e':
                                                  ava Basic Code$ java SixteenProgram@
           case 'i':
           case 'o':
           case 'u':
                                                 Character is a consonant.
           case 'A':
                                                 mohiuddin-murad@Murad:~/Downloads/J
           case 'E':
                                                  mohiuddin-murad@Murad:~/Downloads/
           case 'I':
                                                  va Basic Code$
           case '0':
           case 'U':
              System.out.println("Character is a vowel.");
              break:
              System.out.println("Character is a consonant.");
       }
   }
}
```

18. Write a Java Program to find factorial of a number using loops.

```
import java.util.*;
                                                                   moh...
                                                                           Q
                                                     loads/Java Basic Code$ jav
public class EightteenProgram {
                                                    ac EightteenProgram.java
    public static void main(String[] args) {
                                                    mohiuddin-murad@Murad:~/Dow
        Scanner input = new Scanner(System.in);
                                                    nloads/Java Basic Code$ jav
                                                    a EightteenProgram
        int num = input.nextInt();
                                                    Factorial of 5 is 120
        int factorial = 1;
                                                    mohiuddin-murad@Murad:~/Dow
        for (int i = 1; i <= num; i++)</pre>
                                                    mohiuddin-murad@Murad:~/Dow
                                                    nloads/Java Basic Code$
        {
            factorial *= i;
        System.out.println("Factorial of " + num + " is " + factorial);
    }
}
```

17. Write a Java Program to make a Simple Calculator using Switch Case.

```
import java.util.*;
public class SeventeenProgram {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print("first number: ");
      double num1;
                                                          first number: 4
      num1 = input.nextDouble();
      char ch;
                                                          second number: 6
      ch= input.next().charAt(0);
                                                          Sum is: 10.0
                                                          mohiuddin-murad@Murad:~/Downloads/Java Basic Code$ java Seven
      System.out.print("second number: ");
                                                          teenProgram
      double num2;
                                                          first number: 5
      num2 = input.nextDouble();
      double ans;
                                                          second number: 1
                                                          Subtraction is: 4.0
      switch (ch) {
                                                          mohiuddin-murad@Murad:~/Downloads/Java Basic Code$ java Seven
          case '+':
                                                          teenProgram
             ans = num1 + num2:
             System.out.println("Sum is: " + ans);
                                                          first number: 5
             break:
          case '-':
                                                          second number: 5
             ans = num1 - num2;
                                                          Multiplication is: 25.0
             System.out.println("Subtraction is: " + ans);
                                                          mohiuddin-murad@Murad:~/Downloads/Java Basic Code$ java Seven
             break;
                                                         teenProgram
          case '*':
                                                          first number: 5
             ans = num1 * num2;
             System.out.println("Multiplication is: " + ans);
                                                          second number: 4
             break;
                                                         Division is: 1.25
          case '/':
                                                          nohiuddin-murad@Murad:~/Downloads/Java Basic Code$
             if (num2 != 0)
                 ans = num1 / num2;
                 System.out.println("Division is: " + ans);
             else
                 System.out.println("Error");
          default:
             System.out.println("Invalid operator.");
   }
}
```

19. Write a Java Program to print Fibonacci Series using loop.

■ Code and Output:

```
import java.util.*;
public class NineteenProgram {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        int n = input.nextInt();
                                                     mohiuddin-mu...
                                                   mohiuddin-murad@Murad:~/Downloads/
        int a = 0, b = 1;
                                                   Java Basic Code$ java NineteenProg
        System.out.println("Fibonacci Series:");
                                                  ram
        for (int i = 1; i <= n; i++)</pre>
                                                  Fibonacci Series:
                                                  0 1 1 2 3 mohiuddin-murad@Murad:~/
            System.out.print(a + " ");
                                                   Downloads/Java Basic Code$
            int c = a + b;
            a = b;
            b = c;
        }
    }
```

21. Write a Java program to Reverse words in a given string

```
import java.util.*;
                                               . .
                                                            mohiuddin-...
                                                                         Q
import java.io.*;
import java.lang.*;
                                             neProgram.java
                                              mohiuddin-murad@Murad:~/Download
                                              /Java Basic Code$ java TwentyOn
public class TwentyOneProgram {
                                              eProgram
                                              This is a Book
                                             kooB a si sihT
  public static void main(String[] args)
                                              mohiuddin-murad@Murad:~/Dowmmmom
  {
                                             mohiuddin-murad@Murad:~/Download
    Scanner input = new Scanner(System.in); s/Java Basic Code$
                String s;
                s=input.nextLine();
                StringBuilder input1 = new StringBuilder();
                input1.append(s);
                input1.reverse();
                System.out.println(input1);
  }
```

20. Write a Java program to Find Second largest element in an array.

```
public class TwentyProgram {
    public static void main(String[] args) {
        int[] arr = {55, 95, 91, 0, 94, 11};
        int a = SecLargest(arr);
        if (a != -1)
            System.out.println("Second largest element is: " + a);
        }
        else
            System.out.println("Invalid input array");
    }
                                                 mohiuddin-murad@...
                                                                                   Q
    public static int SecLargest(int[] arr) {
                                               mohiuddin-murad@Murad:~/Downloads/Java
        if (arr == null || arr.length < 2) {</pre>
                                                Basic Code$ javac TwentyProgram.java
            return -1;
                                               mohiuddin-murad@Murad:~/Downloads/Java
                                                Basic Code$ java TwentyProgram
                                               Second largest element is: 94
        int lar = Integer.MIN_VALUE;
                                               mohiuddin-murad@Murad:~/Downloads/Java
                                               mohiuddin-murad@Murad:~/Downloads/Java
        int secLar = Integer.MIN VALUE;
                                                Basic Code$
        for (int num : arr) {
            if (num > lar) {
                secLar = lar;
               lar = num;
            } else if (num > secLar && num != lar) {
               secLar = num;
        return secLar;
    }
}
```

22. Write a program in Java to count the total number of alphabets, digits and special characters in a string.

■ Code and Output:

```
import java.util.*;
 public class TwentyTwoProgram {
     public static void main(String[] args) {
          Scanner input = new Scanner(System.in);
                                                                                       moh...
         String s = input.nextLine();
                                                                       nohiuddin-murad@Murad:~/Dov
          int alphaCount = 0;
                                                                       nloads/Java Basic Code$ jav
          int digitCount = 0;
                                                                      ac TwentyTwoProgram.java
          int speCharCount = 0;
                                                                      mohiuddin-murad@Murad:~/D
                                                                       loads/Java Basic Code$ jav
                                                                      a TwentyTwoProgram
         for (int i = 0; i < s.length(); i++)</pre>
                                                                      Abcd 1234 @£$
                                                                      Total alphabets: 4
              char ch = s.charAt(i);
                                                                      Total digits: 4
              if (Character.isLetter(ch))
                                                                      Total special characters: 5
                                                                      mohiuddin-murad@Murad:~/Do
                  alphaCount++:
                                                                       loads/Java Basic Code$mohi
                                                                      mohiuddin-murad@Murad:~/
              else if (Character.isDigit(ch))
                                                                       loads/Java Basic Code$
                  digitCount++;
              }
              else
              {
                  speCharCount++;
              }
          System.out.println("Total alphabets: " + alphaCount);
         System.out.println("Total digits: " + digitCount);
System.out.println("Total special characters: " + speCharCount);
     }
}
```

23. Write a Java program to check whether a substring is present in a string.

```
import java.util.*;
                                                                    mohi...
public class TwentyThreeProgram {
    public static void main(String[] args) {
                                                      oads/Java Basic Code$ java
                                                      TwentyThreeProgram
        Scanner input = new Scanner(System.in);
                                                      My name is Murad
        String s, subs;
                                                     Murad
        s = input.nextLine();
                                                      Substring is there!
        subs = input.nextLine();
                                                      mohiuddin-murad@Murad:~/Down
                                                      mohiuddin-murad@Murad:~/Down
                                                      oads/Java Basic Code$
        if (s.contains(subs))
        {
            System.out.println("Substring is there!");
        }
        else
        {
            System.out.println("Substring not found!");
        }
    }
}
```

24. Write a program in C to find the frequency of characters.

```
import java.util.*;
                                                                     My Name is Murad
                                                                     Character frequencies:
                                                                     a:-2
public class TwentyFourProgram {
                                                                     r:-1
    public static void main(String[] args) {
                                                                     s:-1
        Scanner input = new Scanner(System.in);
                                                                     d:-1
        String s;
                                                                     e:-1
        s = input.nextLine();
                                                                     u:-1
        HashMap<Character, Integer> frequencyMap = new HashMap<>(); y:-1
i:-1
                                                                     M:-2
        for (char ch : s.toCharArray())
                                                                     m:-1
            if (Character.isLetter(ch) || Character.isDigit(ch))
                                                                     mohiuddin-murad@Murad:~/Down
                frequencyMap.put(ch, frequencyMap.getOrDefault(ch, 0) + 1);
        System.out.println("Character frequencies:");
        for (char ch : frequencyMap.keySet())
            System.out.println("" + ch + ":-" + frequencyMap.get(ch));
    }
}
```