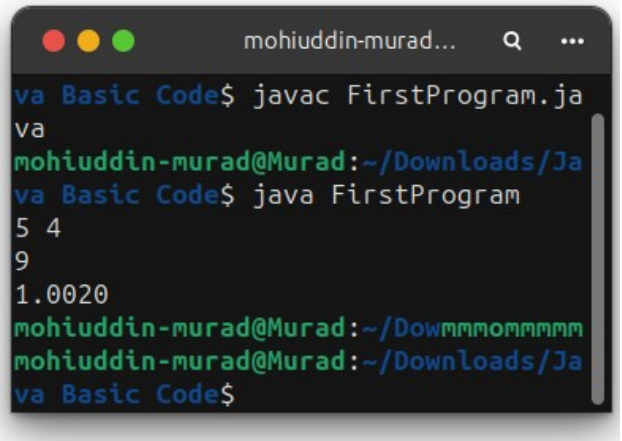
1.Write a Java program to print the sum, divide, product of two numbers.

- **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();
        int sum,product;
        double divide;
        sum=a+b;
        divide=a/b;
        product=a*b;
        System.out.println(sum);
        System.out.printf("%.2f",divide);
        System.out.println(product);

    }
}
```



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

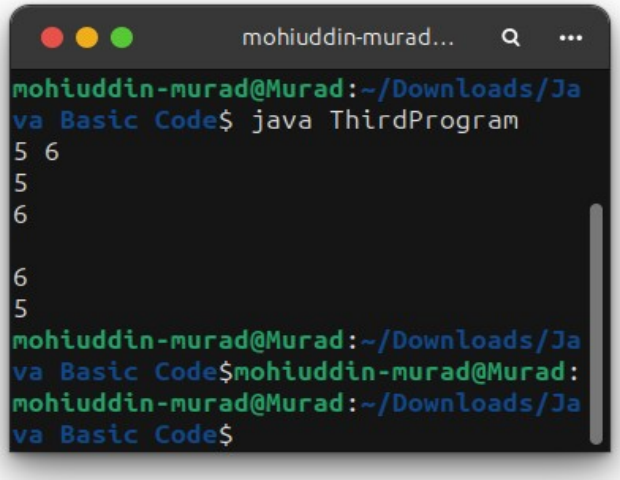
- **Code and Output:**

```
import java.util.*;

public class SecondProgram {

    public static void main(String[] args)
    {
        Scanner input = new Scanner(System.in);
        int r;
        r = input.nextInt();
        double pi = 3.1416;
        double area,perimeter;
        area=pi*r;
        perimeter = 2*pi*r;
        System.out.println(area);
        System.out.println(perimeter);
    }
}
```

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

- **Code and Output:**

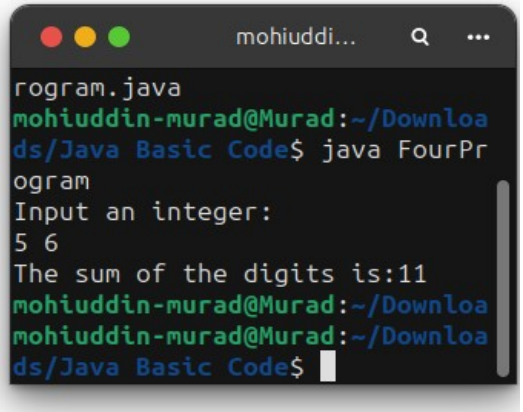
```java
import java.util.*;

public class ThirdProgram {
    public static void main(String[] args)
    {
        Scanner input = new Scanner(System.in);
        int a,b;
        a = input.nextInt();
        b = input.nextInt();
        System.out.println(a);
        System.out.println(b);
        System.out.println(" ");

        a=a+b;
        b=a-b;
        a=a-b;

        System.out.println(a);
        System.out.println(b);
    }
}
```



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)

- **Code and Output:**

```java
import java.util.*;

public class FourProgram {

    public static void main(String[] args)
    {
        Scanner input = new Scanner(System.in);
        int a,b;
        System.out.println("Input an integer:");
        a = input.nextInt();
        b = input.nextInt();
        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:**

```java
import java.util.*;

class Reverse{
    int rever(int n)
    {
        int rem,rev = 0;
        while(n>0){
            rem = n%10;
            rev=(rev*10)+rem;
            n=n/10;
        }
        return rev;
    }
}
public class FiveProgram {
    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));
    }

}
```

```
mohiuddin-murad@Murad: ~/Do...
mohiuddin-murad@Murad:~/Downloads/Java Basic C
ode$ javac FiveProgram.java
mohiuddin-murad@Murad:~/Downloads/Java Basic C
ode$ java FiveProgram
12345
Reverse Number is54321
mohiuddin-murad@Murad:~/Downloads/Java Basic m
mohiuddin-murad@Murad:~/Downloads/Java Basic C
ode$
```

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

- **Code and Output:**

```java
import java.util.*;

public class SevenProgram {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);

        System.out.print("Enter your password: ");
        String password;
        password = input.nextLine();

        System.out.println("Your password is: " + password);
    }
}
```

```
mohiuddin-m...
mohiuddin-murad@Murad:~/Downloads
/Java Basic Code$ java SevenProgr
am
Enter your password: 12345
Your password is: 12345
mohiuddin-murad@Murad:~/Downloads
/Java Basic Code$
```

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

- **Code and Output:**

```java
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;
        for(int i=0;i<s.length();i++)
        {
            if(s.charAt(i)>=48 && s.charAt(i)<=57){
                digit++;
            }
            else if(s.charAt(i)==32)
            {
                space++;
            }
            else if(s.charAt(i)>=65 && s.charAt(i)<=90){
                letters++;
            }
            else if(s.charAt(i)>=97 && s.charAt(i)<=122)
            {
                letters++;
            }
            else if(s.charAt(i)>=33 && s.charAt(i)<=47){
                ch++;
            }
            else if(s.charAt(i)>=58 && s.charAt(i)<=64){
                ch++;
            }
            else if(s.charAt(i)>=91 && s.charAt(i)<=96){
                ch++;
            }
            else if(s.charAt(i)>=123 && s.charAt(i)<=126){
                ch++;
            }
        }
        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);
    }
}
```

```
mohiuddin-murad@Murad: ~/...
 Code$ javac SixProgram.java
mohiuddin-murad@Murad:~/Downloads/Java Basic
 Code$ java SixProgram
Abc 123 @*(
Count off letters: 3
Count off spaces: 2
Count off numbers: 3
Count off characters: 3
mohiuddin-murad@Murad:~/Downloads/Java Basic
mohiuddin-murad@Murad:~/Downloads/Java Basic
 Code$
```

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

- **Code and Output:**

```java
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...
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

- **Code and Output:**

```java
public class NineProgram {
    public static void main(String[] args)
    {
        for(int i=1;i<100;i++)
        {
            if(i%2!=0)
            {
                System.out.print(" "+i);;
            }
        }
    }

}
```

```
mohiuddin-murad...
a Basic Code$ java NineProgram
 1 3 5 7 9 11 13 15 17 19 21 23 25 27
 29 31 33 35 37 39 41 43 45 47 49 51
53 55 57 59 61 63 65 67 69 71 73mohiu
ddin-murad@Murad:~/Downloads/Java Bas
ic Code$mohiuddin-murad@Murad:~/Downl
mohiuddin-murad@Murad:~/Downloads/Jav
a Basic Code$
```

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.

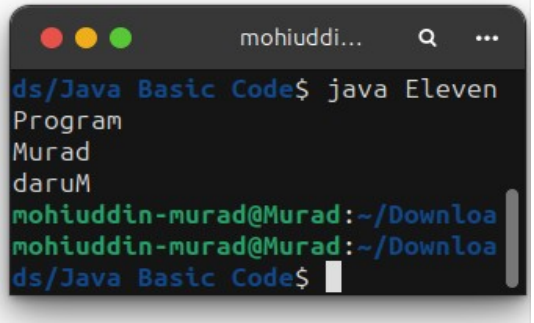
- **Code and Output:**

```java
import java.util.*;

public class TenProgram {

    public static void main(String[] args)
    {
        Scanner input = new Scanner(System.in);
        int n;
        n = input.nextInt();
        if(n%2==0)
        {
            System.out.println("1");
        }
        else
        {
            System.out.println("0");
        }
    }
}
```

11.Write a Java program to reverse a word.

- **Code and Output:**

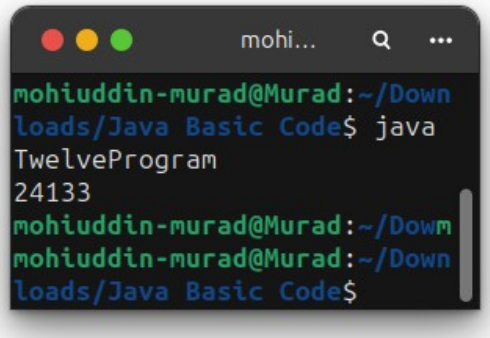
```java
import java.util.*;

public class ElevenProgram {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        String s = input.nextLine();
        String rev = Reverse(s);

        System.out.println(rev);
    }

        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:**

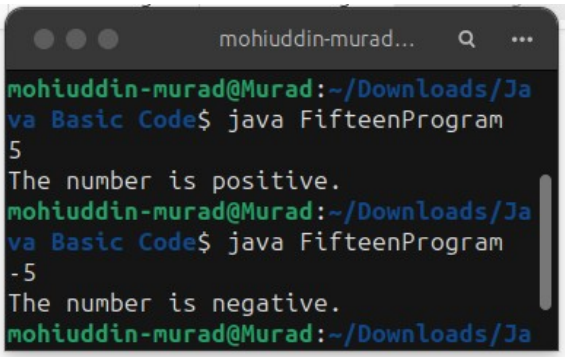
```java
public class TwelveProgram {
    public static void main(String[] args) {
        int count = 0;
        long sum = 0;
        int number = 2;

        while (count < 100) {
            if (isPrime(number)) {
                sum += number;
                count++;
            }
            number++;
        }
        System.out.println(sum);
    }
    public static boolean isPrime(int num) {
        if (num <= 1) {
            return false;
        }
        for (int i = 2; i <= Math.sqrt(num); i++) {
            if (num % i == 0) {
                return false;
            }
        }
        return true;
    }
}
```



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

- **Code and Output:**

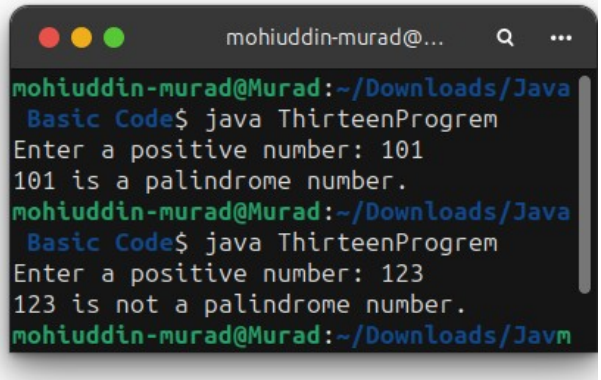
```java
import java.util.*;

public class FifteenProgram {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        int num;
        num = input.nextInt();

        if (num > 0) {
            System.out.println("The number is positive.");
        } else if (num < 0) {
            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:**

```java
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.");
        }
    }
    public static boolean isPalindrome(int num) {
        int number = num;
        int rev = 0;

        while (num != 0) {
            int n = num % 10;
            rev = rev * 10 + n;
            num /= 10;
        }

        return number == rev;
    }
}
```



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

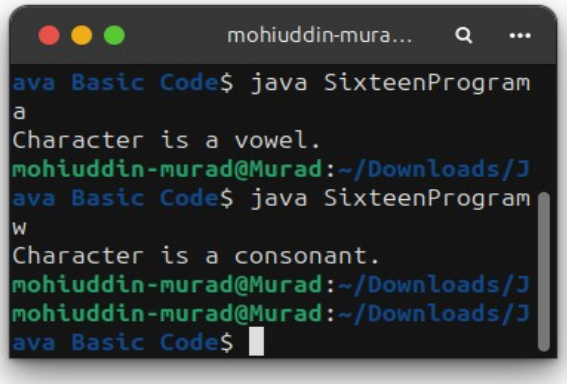
- **Code and Output:**

```java
public class FourteenProgram {
    public static void main(String[] args) {
        int num1 = 50;
        int num2 = 200;
        int num3 = 1;

        if (num1 >= num2 && num1 >= num3) {
            System.out.println(num1);
        } else if (num2 >= num1 && num2 >= num3) {
            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:**

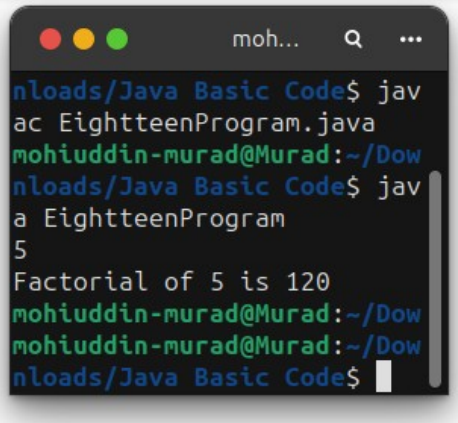
```java
import java.util.*;

public class SixteenProgram {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        char ch;
        ch = input.next().charAt(0);
        switch (ch) {
            case 'a':
            case 'e':
            case 'i':
            case 'o':
            case 'u':
            case 'A':
            case 'E':
            case 'I':
            case 'O':
            case 'U':
                System.out.println("Character is a vowel.");
                break;
            default:
                System.out.println("Character is a consonant.");
                break;
        }
    }
}
```



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

- **Code and Output:**

```java
import java.util.*;

public class EightteenProgram {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        int num = input.nextInt();

        int factorial = 1;
        for (int i = 1; i <= num; i++)
        {
            factorial *= i;
        }

        System.out.println("Factorial of " + num + " is " + factorial);
    }
}
```



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

- **Code and Output:**

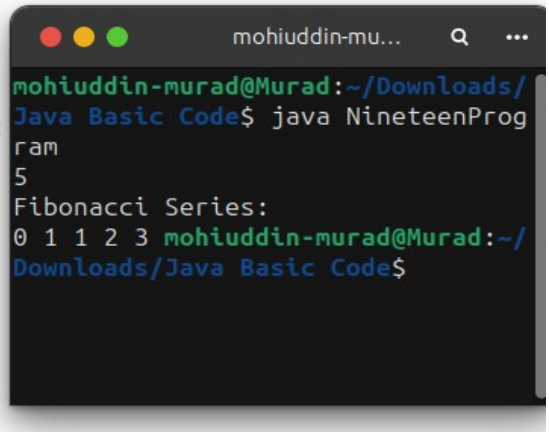
```java
import java.util.*;

public class SeventeenProgram {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print("first number: ");
        double num1;
        num1 = input.nextDouble();

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

        System.out.print("second number: ");
        double num2;
        num2 = input.nextDouble();
        double ans;

        switch (ch) {
            case '+':
                ans = num1 + num2;
                System.out.println("Sum is: " + ans);
                break;
            case '-':
                ans = num1 - num2;
                System.out.println("Subtraction is: " + ans);
                break;
            case '*':
                ans = num1 * num2;
                System.out.println("Multiplication is: " + ans);
                break;
            case '/':
                if (num2 != 0)
                {
                    ans = num1 / num2;
                    System.out.println("Division is: " + ans);
                }
                else
                {
                    System.out.println("Error");
                }
                break;
            default:
                System.out.println("Invalid operator.");
        }
    }
}
```

```
mohiuddin-murad@Murad: ~/Downloads/Java Basic Code
first number: 4
+
second number: 6
Sum is: 10.0
mohiuddin-murad@Murad:~/Downloads/Java Basic Code$ java Seven
teenProgram
first number: 5
-
second number: 1
Subtraction is: 4.0
mohiuddin-murad@Murad:~/Downloads/Java Basic Code$ java Seven
teenProgram
first number: 5
*
second number: 5
Multiplication is: 25.0
mohiuddin-murad@Murad:~/Downloads/Java Basic Code$ java Seven
teenProgram
first number: 5
/
second number: 4
Division is: 1.25
mohiuddin-murad@Murad:~/Downloads/Java Basic Code$
```

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

- **Code and Output:**

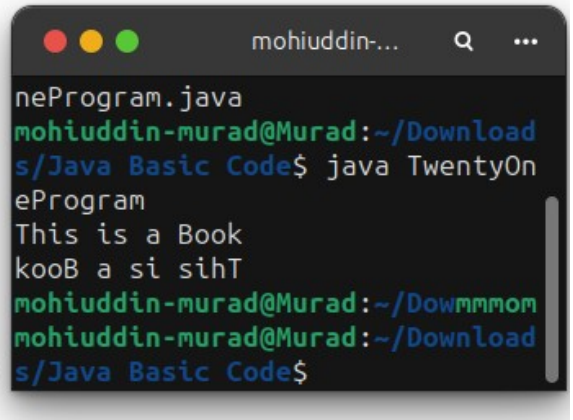
```java
import java.util.*;

public class NineteenProgram {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        int n = input.nextInt();

        int a = 0,b = 1;
        System.out.println("Fibonacci Series:");

        for (int i = 1; i <= n; i++)
        {
            System.out.print(a + " ");

            int c = a + b;
            a = b;
            b = c;
        }
    }
}
```



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

- **Code and Output:**
-

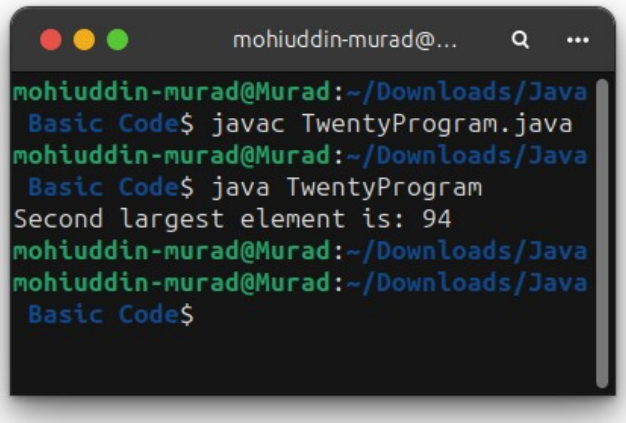
```java
import java.util.*;
import java.io.*;
import java.lang.*;

public class TwentyOneProgram {


  public static void main(String[] args)
  {
    Scanner input = new Scanner(System.in);
                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.

- **Code and Output:**

```java
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");
        }
    }

    public static int SecLargest(int[] arr) {
        if (arr == null || arr.length < 2) {
            return -1;
        }

        int lar = Integer.MIN_VALUE;
        int secLar = Integer.MIN_VALUE;

        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:**

```java
import java.util.*;

public class TwentyTwoProgram {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        String s = input.nextLine();

        int alphaCount = 0;
        int digitCount = 0;
        int speCharCount = 0;

        for (int i = 0; i < s.length(); i++)
        {
            char ch = s.charAt(i);
            if (Character.isLetter(ch))
            {
                alphaCount++;
            }
            else if (Character.isDigit(ch))
            {
                digitCount++;
            }
            else
            {
                speCharCount++;
            }
        }
        System.out.println("Total alphabets: " + alphaCount);
        System.out.println("Total digits: " + digitCount);
        System.out.println("Total special characters: " + speCharCount);
    }
}
```

```
moh...
mohiuddin-murad@Murad:~/Dow
nloads/Java Basic Code$ jav
ac TwentyTwoProgram.java
mohiuddin-murad@Murad:~/Dow
nloads/Java Basic Code$ jav
a TwentyTwoProgram
Abcd 1234 @£$
Total alphabets: 4
Total digits: 4
Total special characters: 5
mohiuddin-murad@Murad:~/Dow
nloads/Java Basic Code$mohi
mohiuddin-murad@Murad:~/Dow
nloads/Java Basic Code$
```

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

- **Code and Output:**

```java
import java.util.*;
public class TwentyThreeProgram {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        String s,subs;
        s = input.nextLine();
        subs = input.nextLine();

        if (s.contains(subs))
        {
            System.out.println("Substring is there!");
        }
        else
        {
            System.out.println("Substring not found!");
        }
    }
}
```

```
mohi...
loads/Java Basic Code$ java
TwentyThreeProgram
My name is Murad
Murad
Substring is there!
mohiuddin-murad@Murad:~/Down
mohiuddin-murad@Murad:~/Down
loads/Java Basic Code$
```

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

- **Code and Output:**

```java
import java.util.*;

public class TwentyFourProgram {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        String s;
        s = input.nextLine();
        HashMap<Character, Integer> frequencyMap = new HashMap<>();

        for (char ch : s.toCharArray())
        {
            if (Character.isLetter(ch) || Character.isDigit(ch))
            {
                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));
        }
    }
}
```

```
My Name is Murad
Character frequencies:
a:-2
r:-1
s:-1
d:-1
e:-1
u:-1
y:-1
i:-1
M:-2
m:-1
N:-1
mohiuddin-murad@Murad:~/Downlo
```