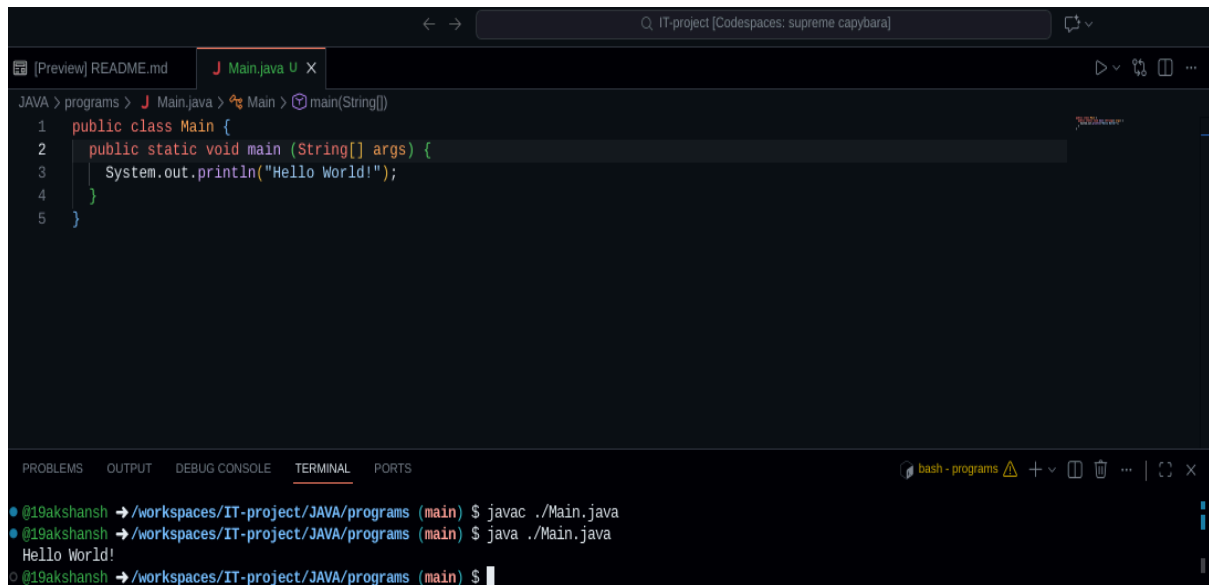


PROGRAM 1:

Print a simple “Hello World!” and move the subsequent text to the next line.



The screenshot shows a code editor with a file named `Main.java`. The code is as follows:

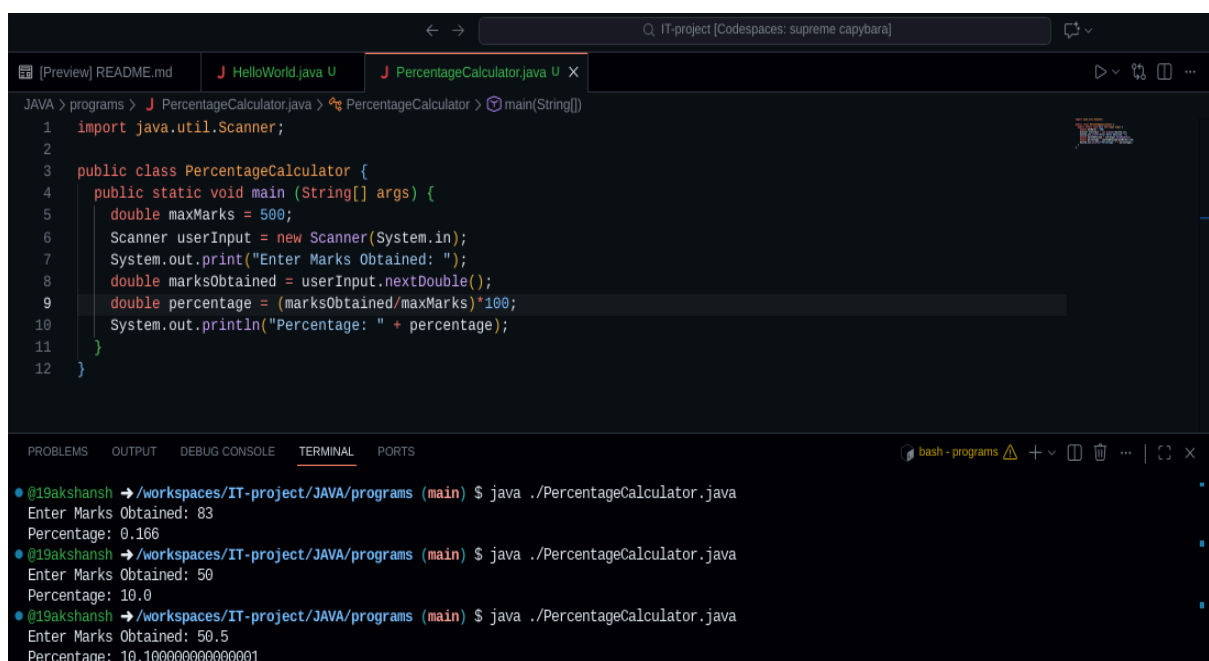
```
1 public class Main {
2     public static void main (String[] args) {
3         System.out.println("Hello World!");
4     }
5 }
```

The terminal output shows the following commands and results:

```
@19akshansh → /workspaces/IT-project/JAVA/programs (main) $ javac ./Main.java
@19akshansh → /workspaces/IT-project/JAVA/programs (main) $ java ./Main.java
Hello World!
@19akshansh → /workspaces/IT-project/JAVA/programs (main) $
```

PROGRAM 2:

Receive grade(in float) from the User and return the percentage based on the fact that max marks = 500.



The screenshot shows a code editor with a file named `PercentageCalculator.java`. The code is as follows:

```
1 import java.util.Scanner;
2
3 public class PercentageCalculator {
4     public static void main (String[] args) {
5         double maxMarks = 500;
6         Scanner userInput = new Scanner(System.in);
7         System.out.print("Enter Marks Obtained: ");
8         double marksObtained = userInput.nextDouble();
9         double percentage = (marksObtained/maxMarks)*100;
10        System.out.println("Percentage: " + percentage);
11    }
12 }
```

The terminal output shows the following commands and results:

```
@19akshansh → /workspaces/IT-project/JAVA/programs (main) $ java ./PercentageCalculator.java
Enter Marks Obtained: 83
Percentage: 0.166
@19akshansh → /workspaces/IT-project/JAVA/programs (main) $ java ./PercentageCalculator.java
Enter Marks Obtained: 50
Percentage: 10.0
@19akshansh → /workspaces/IT-project/JAVA/programs (main) $ java ./PercentageCalculator.java
Enter Marks Obtained: 50.5
Percentage: 10.100000000000001
```

PROGRAM 3:

Receive two Integers and return their sum.

```
JAVA > programs > J SumTwoNumbers.java > SumTwoNumbers > main(String[])
1  import java.util.Scanner;
2
3  public class SumTwoNumbers {
4      public static void main(String[] args) {
5          Scanner sc = new Scanner(System.in);
6          System.out.print("Enter first number: ");
7          int a = sc.nextInt();
8          System.out.print("Enter second number: ");
9          int b = sc.nextInt();
10         int sum = a + b;
11         System.out.println("Sum = " + sum);
12     }
13 }
14
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

bash - programs

@19akshansh → /workspaces/IT-project/JAVA/programs (main) \$ java ./SumTwoNumbers.java
Enter first number: 10
Enter second number: 20
Sum = 30
@19akshansh → /workspaces/IT-project/JAVA/programs (main) \$

PROGRAM 4:

Receive a non-zero Integer and identify whether it's Odd or Even.

```
J EvenOrOdd.java U X
J EvenOrOdd.java > EvenOrOdd > main(String[])
1  import java.util.Scanner;
2
3  public class EvenOrOdd {
4      public static void main(String[] args) {
5          Scanner sc = new Scanner(System.in);
6          System.out.print("Enter a number: ");
7          int n = sc.nextInt();
8
9          if (n == 0)
10             System.out.println("0 is neither Odd nor Even!");
11         else if (n % 2 == 0)
12             System.out.println(n+ " is an Even number");
13         else
14             System.out.println(n+ " is an Odd number");
15     }
16 }
17
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

@19akshansh → /workspaces/IT-project/JAVA/programs (main) \$ java ./EvenOrOdd.java
Enter a number: 12
12 is an Even number
@19akshansh → /workspaces/IT-project/JAVA/programs (main) \$

PROGRAM 5:

Receive three numbers and return the largest one.

```
JAVA > programs > J LargestOfThree.java > LargestOfThree > main(String[])
1  import java.util.Scanner;
2
3  public class LargestOfThree {
4      public static void main(String[] args) {
5          Scanner sc = new Scanner(System.in);
6
7          System.out.print("Enter a: ");
8          int a = sc.nextInt();
9          System.out.print("Enter b: ");
10         int b = sc.nextInt();
11         System.out.print("Enter c: ");
12         int c = sc.nextInt();
13
14         int largest = a;
15         if (b > largest) largest = b;
16         if (c > largest) largest = c;
17
18         System.out.println("Largest = " + largest);
19     }
20 }
21
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
● @19akshansh → /workspaces/IT-project/JAVA/programs (main) $ java ./LargestOfThree.java
Enter a: 10
Enter b: 12
Enter c: 8
Largest = 12
○ @19akshansh → /workspaces/IT-project/JAVA/programs (main) $
```

PROGRAM 6:

Receive a radius and return the area of the circle.

```
J AreaCircle.java U X
JAVA > programs > J AreaCircle.java > AreaCircle > main(String[])
1  import java.util.Scanner;
2
3  public class AreaCircle {
4      public static void main(String[] args) {
5          Scanner sc = new Scanner(System.in);
6
7          System.out.print("Enter radius of the circle: ");
8          double r = sc.nextDouble();
9
10         double area = 3.14159 * r * r;
11         System.out.println("Area of the circle = " + area);
12     }
13 }
14
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
● @19akshansh → /workspaces/IT-project/JAVA/programs (main) $ java ./AreaCircle.java
Enter radius of the circle: 7
Area of the circle = 153.93791
○ @19akshansh → /workspaces/IT-project/JAVA/programs (main) $
```

PROGRAM 7:

Receive a radius and return the area of the cube.

```
J AreaCube.java U X
JAVA > programs > J AreaCube.java > AreaCube > main(String[])
1  import java.util.Scanner;
2
3  public class AreaCube {
4      public static void main(String[] args) {
5          Scanner sc = new Scanner(System.in);
6
7          System.out.print("Enter length of a side of the cube(cms): ");
8          double a = sc.nextDouble();
9
10         double area = a * a * a;
11         System.out.println("Area of the Cube = " + area);
12     }
13 }
14
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
● @19akshansh → /workspaces/IT-project/JAVA/programs (main) $ java ./AreaCube.java
Enter length of a side of the cube(cms): 12
Area of the Cube = 1728.0
○ @19akshansh → /workspaces/IT-project/JAVA/programs (main) $
```

PROGRAM 8:

Receive a Number and return its Factorial.

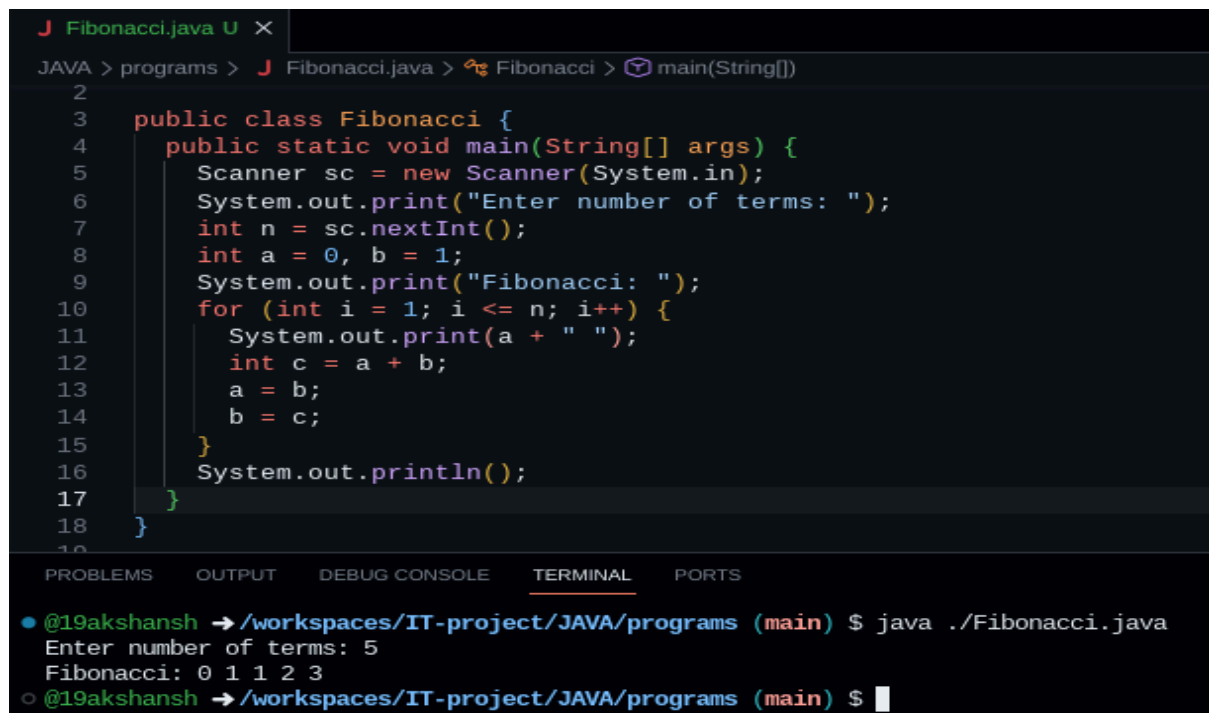
```
J Factorial.java U X
JAVA > programs > J Factorial.java > Factorial > main(String[])
1  import java.util.Scanner;
2
3  public class Factorial {
4      public static void main(String[] args) {
5          Scanner sc = new Scanner(System.in);
6          System.out.print("Enter a number: ");
7          int n = sc.nextInt();
8          long fact = 1;
9          for (int i = 1; i <= n; i++) {
10             fact *= i;
11         }
12         System.out.println("Factorial of " + n + " = " + fact);
13     }
14 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
● @19akshansh → /workspaces/IT-project/JAVA/programs (main) $ java ./Factorial.java
Enter a number: 4
Factorial of 4 = 24
○ @19akshansh → /workspaces/IT-project/JAVA/programs (main) $
```

PROGRAM 9:

Returns a Fibonacci Sequence.

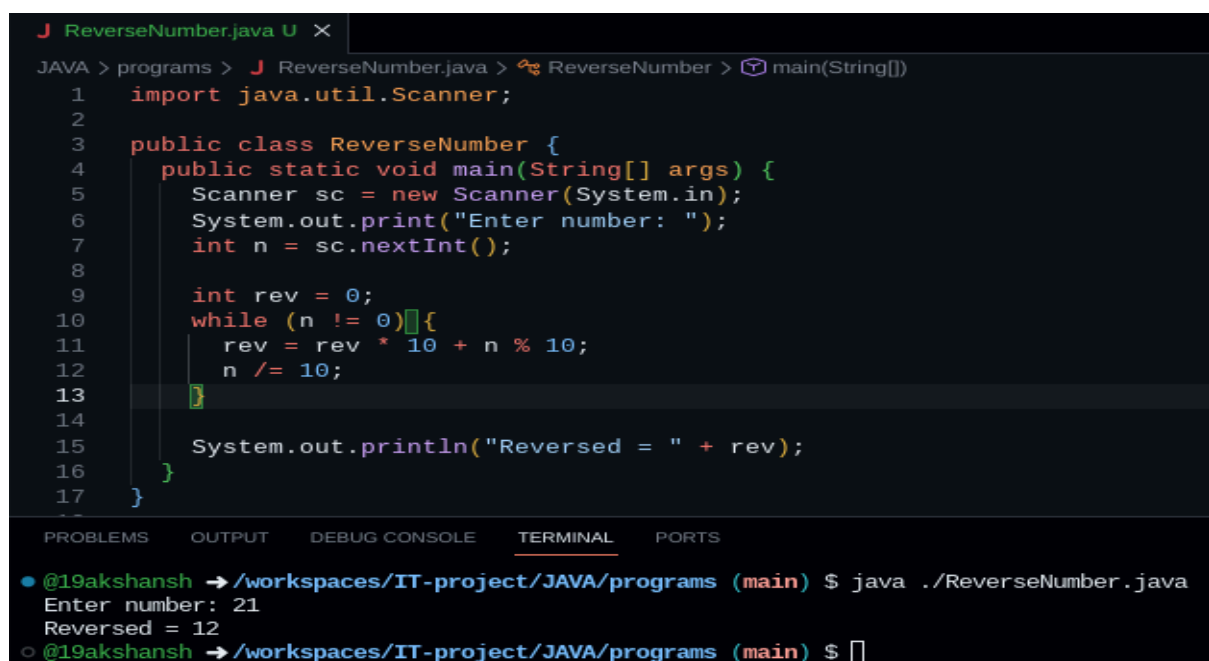


```
J Fibonacci.java U X
JAVA > programs > J Fibonacci.java > Fibonacci > main(String[])
2
3 public class Fibonacci {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.print("Enter number of terms: ");
7         int n = sc.nextInt();
8         int a = 0, b = 1;
9         System.out.print("Fibonacci: ");
10        for (int i = 1; i <= n; i++) {
11            System.out.print(a + " ");
12            int c = a + b;
13            a = b;
14            b = c;
15        }
16        System.out.println();
17    }
18 }
19

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
● @19akshansh → /workspaces/IT-project/JAVA/programs (main) $ java ./Fibonacci.java
Enter number of terms: 5
Fibonacci: 0 1 1 2 3
○ @19akshansh → /workspaces/IT-project/JAVA/programs (main) $
```

PROGRAM 10:

Receive a Number and return its reverse.



```
J ReverseNumber.java U X
JAVA > programs > J ReverseNumber.java > ReverseNumber > main(String[])
1 import java.util.Scanner;
2
3 public class ReverseNumber {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.print("Enter number: ");
7         int n = sc.nextInt();
8
9         int rev = 0;
10        while (n != 0) {
11            rev = rev * 10 + n % 10;
12            n /= 10;
13        }
14
15        System.out.println("Reversed = " + rev);
16    }
17 }
18

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
● @19akshansh → /workspaces/IT-project/JAVA/programs (main) $ java ./ReverseNumber.java
Enter number: 21
Reversed = 12
○ @19akshansh → /workspaces/IT-project/JAVA/programs (main) $
```

PROGRAM 11:

Receive a number and return whether it is a Palindrome or not

```
J Palindrome.java U x
JAVA > programs > J Palindrome.java > Palindrome > main(String[])
1  import java.util.Scanner;
2
3  public class Palindrome {
4      public static void main(String[] args) {
5          Scanner sc = new Scanner(System.in);
6          System.out.print("Enter number: ");
7          int n = sc.nextInt();
8          int temp = n, rev = 0;
9          while (temp != 0) {
10             rev = rev * 10 + temp % 10;
11             temp /= 10;
12         }
13         if (rev == n)
14             System.out.println("Palindrome");
15         else
16             System.out.println("Not Palindrome");
17     }
18 }
19

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
• @19akshansh → /workspaces/IT-project/JAVA/programs (main) $ java ./Palindrome.java
Enter number: 121
Palindrome
○ @19akshansh → /workspaces/IT-project/JAVA/programs (main) $
```

PROGRAM 12:

Receive a Number and Check whether its a Prime number or not.

```
J PrimeNumberCheck.java U x
JAVA > programs > J PrimeNumberCheck.java > PrimeNumberCheck > main(String[])
1  import java.util.Scanner;
2
3  public class PrimeNumberCheck {
4      public static void main(String[] args) {
5          Scanner sc = new Scanner(System.in);
6          System.out.print("Enter number: ");
7          int n = sc.nextInt();
8          boolean prime = true;
9          if (n <= 1) prime = false;
10         for (int i = 2; i <= Math.sqrt(n); i++) {
11             if (n % i == 0) {
12                 prime = false;
13                 break;
14             }
15         }
16         if (prime)
17             System.out.println("Prime number");
18         else
19             System.out.println("Not prime");
20     }
21 }
22

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
• @19akshansh → /workspaces/IT-project/JAVA/programs (main) $ java PrimeNumberCheck.java
Enter number: 12
Not prime
```

PROGRAM 13:

Receive a Number and provide the sum of its digits.

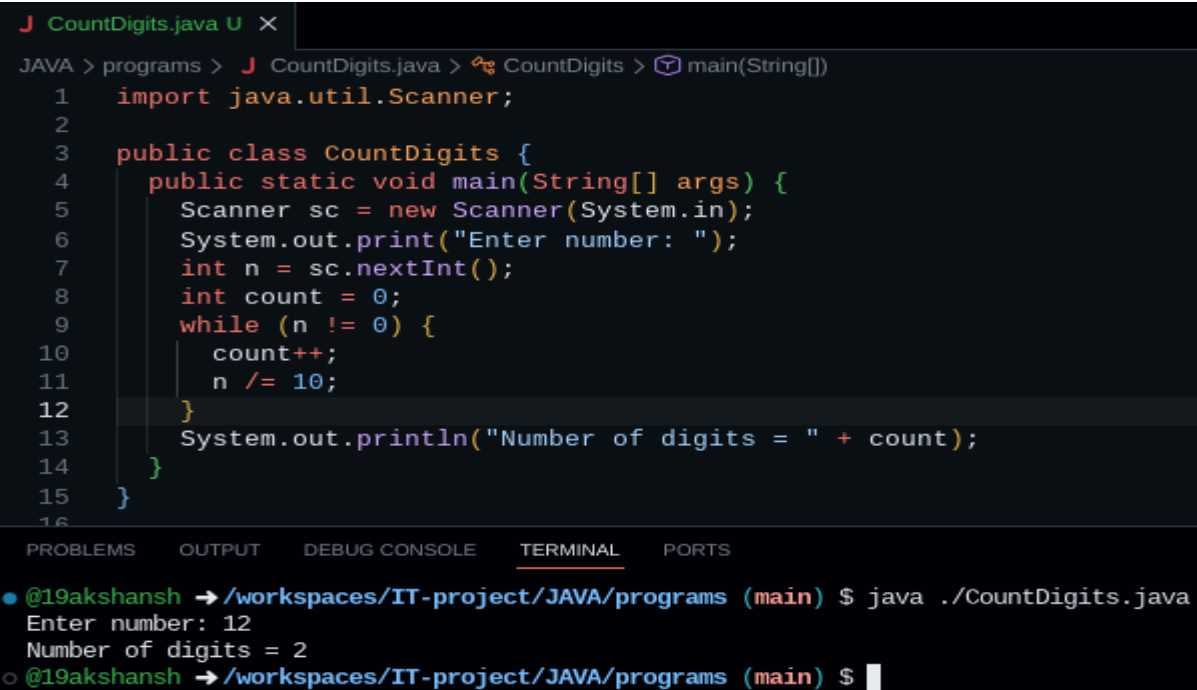


```
J SumOfDigits.java U X
JAVA > programs > J SumOfDigits.java > ...
1  import java.util.Scanner;
2
3  public class SumOfDigits {
4      public static void main(String[] args) {
5          Scanner sc = new Scanner(System.in);
6
7          System.out.print("Enter number: ");
8          int n = sc.nextInt();
9
10         int sum = 0;
11         while (n != 0) {
12             sum += n % 10;
13             n /= 10;
14         }
15
16         System.out.println("Sum of digits = " + sum);
17     }
18 }

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
• @19akshansh → /workspaces/IT-project/JAVA/programs (main) $ java ./SumOfDigits.java
Enter number: 12
Sum of digits = 3
```

PROGRAM 14:

Receive a Number and return the number of digits in that number.



```
J CountDigits.java U X
JAVA > programs > J CountDigits.java > CountDigits > main(String[])
1  import java.util.Scanner;
2
3  public class CountDigits {
4      public static void main(String[] args) {
5          Scanner sc = new Scanner(System.in);
6          System.out.print("Enter number: ");
7          int n = sc.nextInt();
8          int count = 0;
9          while (n != 0) {
10             count++;
11             n /= 10;
12         }
13         System.out.println("Number of digits = " + count);
14     }
15 }

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
• @19akshansh → /workspaces/IT-project/JAVA/programs (main) $ java ./CountDigits.java
Enter number: 12
Number of digits = 2
• @19akshansh → /workspaces/IT-project/JAVA/programs (main) $
```

PROGRAM 15:

Receive a Number and return its Multiplication Table up to 10 Multiples.

```
J MultiplicationTable.java U X
JAVA > programs > J MultiplicationTable.java > ...
1  import java.util.Scanner;
2
3  public class MultiplicationTable {
4      public static void main(String[] args) {
5          Scanner sc = new Scanner(System.in);
6
7          System.out.print("Enter number: ");
8          int n = sc.nextInt();
9
10         for (int i = 1; i <= 10; i++) {
11             System.out.println(n + " x " + i + " = " + (n * i));
12         }
13     }
14 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
• @19akshansh → /workspaces/IT-project/JAVA/programs (main) $ java ./MultiplicationTable.java
Enter number: 20
20 x 1 = 20
20 x 2 = 40
20 x 3 = 60
20 x 4 = 80
20 x 5 = 100
20 x 6 = 120
20 x 7 = 140
20 x 8 = 160
20 x 9 = 180
20 x 10 = 200
```