1. Write a program to get the following output. Hey there,

I am "some data"! (assign a variable and print the variable data

```
☑ First.java × ☑ Second.java
  1 import java.util.Scanner;
  5●
       public static void main(String[] args) {
           // TODO Auto-generated method stub
             Scanner sc= new Scanner(System.in);
             System.out.println("Enter your name: ");
             String name= sc.next();
             System.out.println("Hey there, \nI am "+name);
             sc.close();
🦹 Problems 🏿 Javadoc 🖳 Declaration 💂 Console 🗵
<terminated > First [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Nov 23,
Enter your name:
merina
Hey there,
I am merina
```

2. Write a program to print the difference and product of numbers 45 and 32.

```
☑ First.java
           Second.java ×
        public static void main(String[] args) {
4⊜
<u>2</u> 5
            // TODO Auto-generated method stub
            int a,b,diff,prod;
            a = 45;
            b=32;
            diff= a-b;
            prod=a*b;
            System.out.println("The difference of 45 and 32 is: "+diff);
            System.out.println("The product of 45 and 32 is: "+prod);
                                                           🖹 Problems 🏿 Javadoc 🚇 Declaration 🗏 Console 🗵
terminated> Second [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe(Nov 23, 2023, 12:22:58 PM
The difference of 45 and 32 is: 13
The product of 45 and 32 is: 1440
```

3. Write a Java program to print an int, a double, and a char on the screen.

```
☑ Second.java
                           ☑ Third.java ×
☑ First.java
         public static void main(String[] args) {
  4●
             // TODO Auto-generated method stub
              int a= 5;
             System.out.println("int vlaue is: "+a);
              double b= 3.14;
              System.out.println("double vlaue is: "+b);
             char c='M';
             System.out.println("char vlaue is: "+c);

    Problems  
    □ Javadoc  
    □ Declaration  
    □ Console ×

<terminated > Third [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Nov 23,
int vlaue is: 5
double vlaue is: 3.14
char vlaue is: M
```

4. Write a program to calculate the area of a triangle. Area =  $\frac{1}{2}$ \*base\* height or

$$A = \sqrt{s(s-a)(s-b)(s-c)}$$

Where s is the semi-perimeter of the triangle s = (a+b+c)/2

```
public class AreaOfTriangle {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        // int b=5;
        // int h=6;
        // double area= (b*h)/2;
        // System.out.println("Area of Triangle is: "+area);
        int a=4;
        int b=5;
        int c=6;
        double s=(a+b+c)/2;
        double s=(a+b+c)/2;
        double area= Math.sqrt(s*(s-a)*(s-b)*(s-c));
        System.out.println("Area of Triangle is: "+area);
        fo }

Problems    Javadoc    Declaration    Console ×

<terminated > AreaOfTriangle [Java Application] C\Program Files\Java\jdk-19\bin\javaw.exe (Nov 23, 2023, 1)

Area of Triangle is: 6.48074069840786
```

5. Write a Java program to calculate the area of a square. Prompt the user to enter the length of one side and then display the result. Ensure that the program handles user input as a double data type.

6. Create a Java program that converts a temperature in Celsius to Fahrenheit. Prompt the user to enter the temperature in Celsius, perform the conversion using the formula (F = C \* 9/5 + 32), and display the result as a double.

```
☑ First.java
           ☑ Second.java
                         ☑ Third.java
                                     AreaOfTriangle.java
                                                         AreaOfSquare.java
                                                                           1 import java.util.Scanner;
        public static void main(String[] args) {
             Scanner sc= new Scanner (System.in);
             System.out.println("Enter the temperature in Celsius: ");
            double F = (C* 9/5) + 32;
             System.out.println(C+" Celsius temperature is equals to "+F+" Fahrenheit");
            sc.close();
                                                                         🔐 Problems 🏿 a Javadoc 🖳 Declaration 📃 Console 🗵
<terminated> temperature [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Nov 23, 2023, 12:53:55 PM – 12:53:58 PM)
Enter the temperature in Celsius:
34.0 Celsius temperature is equals to 93.2 Fahrenheit
```

7. Develop a Java program that calculates the volume of a cylinder. Prompt the user to enter the radius and height of the cylinder and then display the result. Ensure that the program uses appropriate data types for calculation and output.

```
temperature
🍶 First.java 🗡 🔟 Second.java

☑ Third.java

                                      AreaOfTriang...
                                                       AreaOfSquare...
13
             Scanner sc=new Scanner(System.in);
            System.out.println("Enter the radius of cylinder: ");
            double r= sc.nextDouble();
            System.out.println("Enter the height of cylinder:");
             double h= sc.nextDouble();
            double volume= 3.14* r*r*h;
             System.out.println("The Volume of cylinder is: "+volume);
                                                                  🦹 Problems 🏿 a Javadoc 🚇 Declaration 🗏 Console 🗵
<terminated > First [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Nov 23, 2023, 1:02:52 PM – 1:02
Enter the radius of cylinder:
Enter the height of cylinder:
The Volume of cylinder is: 98.125
```

8. Write a Java program that calculates the simple interest on a loan. Prompt the user to enter the principal amount, the rate of interest, and the time period. Calculate and display the interest amount as a double.

```
AreaOfSquare...
                                             temperature...
                                                             ☑ interest.java ×
🗾 First.java
           AreaOfTriang...
            // TODO Auto-generated method stub
            Scanner sc=new Scanner(System.in);
            System.out.println("Enter the principal amount: ");
            double P= sc.nextDouble();
            System.out.println("Enter the rate of interest: ");
             double R= sc.nextDouble();
            System.out.println("Enter the time period: ");
            double T= sc.nextDouble();
            double SI=(P*T*R)/100;
            System.out.println("The simple interest is: "+SI);
            sc.close();
                                                                  ■ × ½ | B
🦹 Problems 🍳 Javadoc 🚇 Declaration 🗏 Console 🗵
terminated> interest [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Nov 23, 2023, 1:07:2:
Enter the principal amount:
Enter the rate of interest:
Enter the time period:
The simple interest is: 20.0
```

9. Create a Java program that takes two integer inputs from the user, performs all basic arithmetic operations (addition, subtraction, multiplication, and division) on these numbers, and displays the results.

```
import java.util.Scanner;
 5●
        public static void main(String[] args) {
            // TODO Auto-generated method stub
            Scanner sc= new Scanner(System.in);
            System.out.println("Enter a number: ");
            int a= sc.nextInt();
            System.out.println("Enter another number: ");
            int b= sc.nextInt();
            int add= a+b;
            System.out.println("Addition: "+add);
            int sub= a-b;
            System.out.println("Subtraction: "+sub);
            int mul= a*b;
            System.out.println("Multiplication is: "+mul);
            float div= a/b;
            System.out.println("Division is: "+div);
            sc.close();
🔐 Problems 🏿 🗗 Javadoc 🔼 Declaration 🗏 Console 🗵
terminated > Operations [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe(Nov 23,
Enter a number:
Enter another number:
Addition: 6
Subtraction: 4
Multiplication is: 5
Division is: 5.0
```

10. Write a Java program that calculates the perimeter of a rectangle. Prompt the user to enter the length and width of the rectangle, and then display the result. Use appropriate data types for calculation and output.

```
🕡 First.java
            🗾 temperature...
                             ☑ interest.java
                                           Operations.java
                                                            perimeter.java ×
  1 import java.util.Scanner;
         public static void main(String[] args) {
<u>/</u> 6
             // TODO Auto-generated method stub
             Scanner sc= new Scanner(System.in);
             System.out.println("ENter the length: ");
             int L= sc.nextInt();
             System.out.println("Enter the width: ");
             int W= sc.nextInt();
             int peri= 2*(L+W);
            System.out.print("The perimeter is: "+peri);
             sc.close();
🔐 Problems 🏿 a Javadoc 🚇 Declaration 🗏 Console 🗵
terminated> perimeter [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Nov 23, 2023, 1:21
ENter the length:
Enter the width:
The perimeter is: 18
```

11. Develop a Java program that converts miles to kilometers. Prompt the user to enter the distance in miles and display the equivalent distance in kilometers as a double.

```
First.java

☑ interest.java

                          Operations.java
                                           🗾 perimeter.java

☑ Conversion.java × ³⁵

  1 import java.util.Scanner;
        public static void main(String[] args) {
<u>ē</u> 6
             Scanner sc = new Scanner(System.in);
             System.out.print("Enter distance in miles: ");
             double miles = sc.nextDouble();
             double kilometers = miles * 1.60934;
             System.out.println(miles + " miles is equal to " + kilometers + " kilo
             sc.close();
                                                                  🔐 Problems 🏿 🗗 Javadoc 🖳 Declaration 💂 Console 🔀
<terminated> Conversion [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Nov 23, 2023, 1:26:40 PM – 1:26:45 PN
Enter distance in miles: 1500
1500.0 miles is equal to 2414.00999999999 kilometers
```

12. Create a Java program that computes the area of a circle. Prompt the user to enter the radius and display the result as a double. Use the formula (Area =  $\pi * r * r$ ) for the calculation.

```
☑ interest.java
              Operations.java
                               perimeter.java
                                               Conversion.java
                                                                AreaofCircle... ×
  1 import java.util.Scanner;
         public static void main(String[] args) {
             // TODO Auto-generated method stub
             Scanner sc= new Scanner(System.in);
             System.out.println("Enter the radius: ");
             double area= 3.14*r*r;
             System.out.println("The area of circle is: "+area);
             sc.close();
                                                                  🔐 Problems 🏿 Javadoc 🖳 Declaration 📃 Console 🗵
<terminated> AreaofCircle [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Nov 23, 2023, 1:29:55 P
Enter the radius:
The area of circle is: 78.5
```

13. Develop a Java program that calculates the total cost of purchasing a given quantity of items at a certain price per item. Prompt the user to enter the quantity and price, and display the total cost as a double.

```
Operations.java
                perimeter.java
                                Conversion.java
                                                AreaofCircle...
                                                              1 import java.util.Scanner;
        public static void main(String[] args) {
            Scanner sc= new Scanner(System.in);
            System.out.println("Enter the quantity: ");
            int q= sc.nextInt();
            System.out.println("Enter the price: ");
            double p= sc.nextDouble();
            double total= q*p;
            System.out.println("The total price is: "+total);
                                                                🔐 Problems 🏿 a Javadoc 🚇 Declaration 🗏 Console 🗵
<terminated> Cost [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Nov 23, 2023, 1:33:07 PM – 1:33:22 PM) [p
Enter the quantity:
Enter the price:
The total price is: 650.0
```

14. Write a Java program that converts a given amount of money in U.S. dollars to another currency (e.g., rupees). Prompt the user to enter the amount and the exchange rate, and display the converted amount as a double.

```
🗾 money.java 🗴 🥞
perimeter.java
                Conversion.java
                                 AreaofCircle...
                                                 Cost.java
  1 import java.util.Scanner;
  5e
         public static void main(String[] args) {
<u>e</u> 6
             // TODO Auto-generated method stub
             Scanner sc= new Scanner(System.in);
             System.out.println("Enter the amount: ");
             double A= sc.nextDouble();
             System.out.print("Enter the exchange rate: ");
             double R= sc.nextDouble();
             double total= A*R;
             System.out.println("The Converted amount is: "+total);
             sc.close();
🔐 Problems 🏿 🗗 Javadoc 🖳 Declaration 📮 Console 🗵
<terminated> money [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Nov 23, 2023, 1:39:59 PM -
Enter the amount:
Enter the exchange rate: 133.44
The Converted amount is: 733920.0
```