

CODING PRACTICE

WEEK-3(366)(arihant jain)

1. Write a TemperaturConversion program, given the temperature in Celsius as input outputs the temperature in Fahrenheit

Hint =>

- a. Create a **celsius** variable and take the temperature as user input
- b. Use the Formulae Celsius to Fahrenheit: $(^{\circ}\text{C} \times 9/5) + 32 = ^{\circ}\text{F}$ and assign to **fahrenheitResult** and print the result

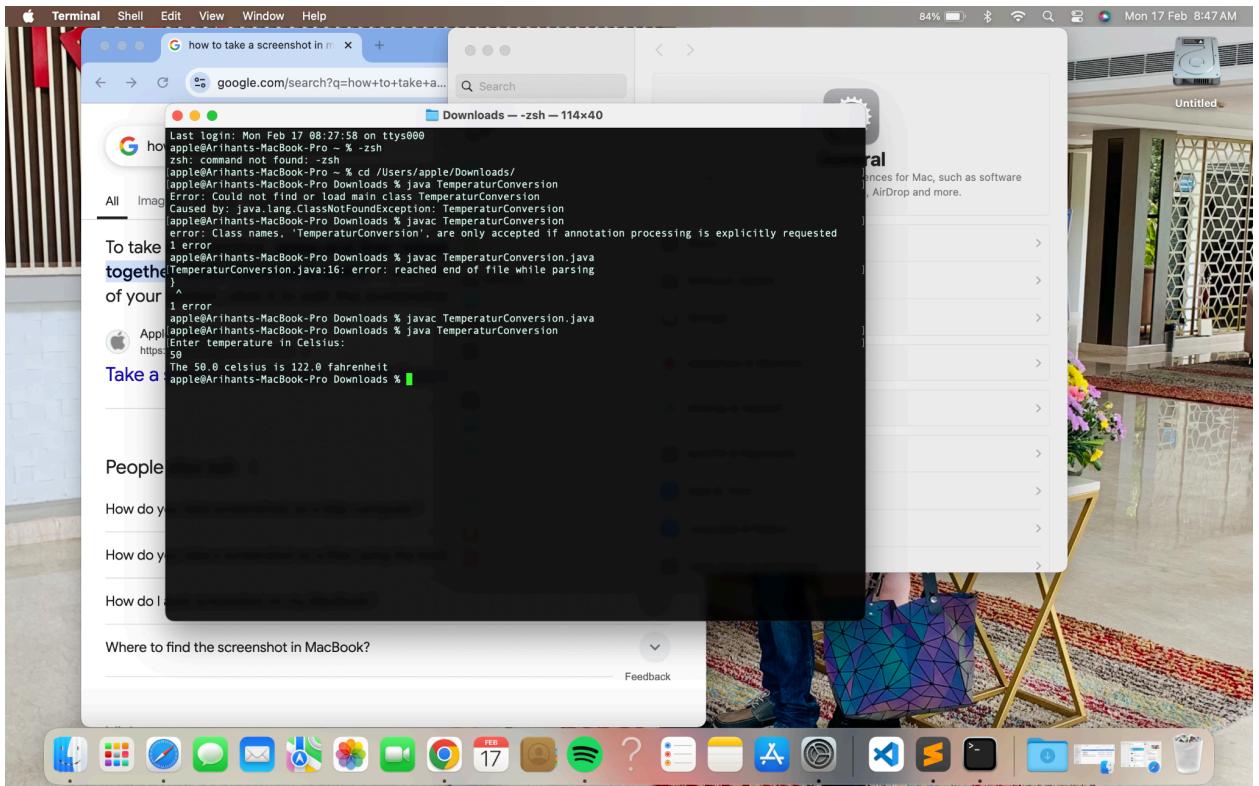
I/P => celcius

O/P => The ____ celsius is ____ fahrenheit

CODE-

```
import java.util.Scanner; // Import Scanner class to take user input
```

```
class TemperaturConversion {  
    public static void main(String[] args) {  
        Scanner input = new Scanner(System.in); // Creating Scanner object for user  
        input  
  
        System.out.println("Enter temperature in Celsius:");  
        double celsius = input.nextDouble();  
  
        double fahrenheitResult = (celsius * 9/5) + 32;  
        System.out.println("The "+celsius+" celsius is "+fahrenheitResult+" fahrenheit");  
  
        input.close(); // Closing the Scanner object to prevent resource leaks  
    }  
}
```



2. Write a TemperaturConversion program, given the temperature in Fahrenheit as input outputs the temperature in Celsius

Hint =>

- Create a **fahrenheit** variable and take the user's input
- User the formulae to convert Fahrenheit to Celsius: $(^{\circ}\text{F} - 32) \times 5/9 = ^{\circ}\text{C}$ and assign the result to **celsiusResult** and print the result

I/P => fahrenheit

O/P => The _____ fahrenheit is _____ celsius

CODE-

```
import java.util.Scanner; // Import the Scanner class for user input
```

```
class TemperatureConversion2 { // Class name should follow Java naming conventions
(PascalCase)
```

```
public static void main(String[] args) {
```

```

Scanner input = new Scanner(System.in); // Create a Scanner object for user input

// Prompt the user to enter the temperature in Fahrenheit
System.out.println("Enter temperature in Fahrenheit: ");

double fahrenheit = input.nextDouble(); // Read the temperature input from the user

// Convert Fahrenheit to Celsius using the formula: (F - 32) * (5/9)
double celsiusResult = (fahrenheit - 32) * (5.0 / 9.0);

// Display the converted temperature
System.out.println("The temperature " + fahrenheit + " Fahrenheit is " + celsiusResult +
" Celsius.");

input.close(); // Close the Scanner object to free resources
}
}

```

The screenshot shows a terminal window with the following session:

```

Last login: Mon Feb 17 08:27:58 on ttys000
apple@Arihants-MacBook-Pro ~ % zsh
zsh command not found: zsh
apple@Arihants-MacBook-Pro ~ % cd ~/Users/apple/Downloads/
apple@Arihants-MacBook-Pro ~/Downloads % java TemperaturConversion
Error: Could not find or load main class TemperaturConversion
Caused by: java.lang.ClassNotFoundException: TemperaturConversion
apple@Arihants-MacBook-Pro ~/Downloads % javac TemperaturConversion
error: Class names, 'TemperaturConversion', are only accepted if annotation processing is explicitly requested
1 error
apple@Arihants-MacBook-Pro ~/Downloads % javac TemperaturConversion.java
TemperaturConversion.java:16: error: reached end of file while parsing
} ^
1 error
apple@Arihants-MacBook-Pro ~/Downloads % javac TemperaturConversion.java
apple@Arihants-MacBook-Pro ~/Downloads % java TemperaturConversion
Enter temperature in Celsius:
59
The 59.0 celcius is 122.0 fahrenheit
apple@Arihants-MacBook-Pro ~/Downloads % java TemperaturConversion2.java
Enter temperature in Fahrenheit:
44
The temperature 44.0 Fahrenheit is 6.666666666666667 Celsius.
apple@Arihants-MacBook-Pro ~/Downloads %

```

The terminal window has a vertical scroll bar on the right side. The status bar at the bottom right corner displays "Line 20, C".

3. Create a program to find the total income of a person by taking salary and bonus from user

Hint =>

- a. Create a variable named salary and take user input.
- b. Create another variable bonus and take user input.
- c. Compute income by adding salary and bonus and print the result

I/P => salary, bonus

O/P => The salary is INR ___ and bonus is INR ___. Hence Total Income is INR ___

CODE-

```
import java.util.Scanner; // Import the Scanner class for user input
```

```
class Totalincome { // Class name should follow Java naming conventions (PascalCase)
```

```
    public static void main(String[] args) {
```

```
        Scanner input = new Scanner(System.in); // Create a Scanner object for user input
```

```
        // Prompt the user to enter their income
```

```
        System.out.println("Enter salary: ");
```

```
        double salary = input.nextDouble(); // Read income input from the user
```

```
        // Prompt the user to enter their bonus
```

```
        System.out.println("Enter bonus: ");
```

```
        double bonus = input.nextDouble(); // Read bonus input from the user
```

```
        // Calculate total income by adding income and bonus
```

```
        double totalIncome = salary+bonus;
```

```
        // Display the entered income, bonus, and total income
```

```
        System.out.println("The income is " + salary+ ", the bonus is " + bonus + ", and the total income is " + totalIncome + ".");
```

```
        input.close(); // Close the Scanner object to free resources
```

```

}

}

Last login: Mon Feb 17 08:27:58 on ttys000
apple@Arihants-MacBook-Pro ~ % zsh
zsh: command not found: zsh
apple@Arihants-MacBook-Pro ~ % cd /Users/apple/Downloads/
apple@Arihants-MacBook-Pro Downloads % java TemperaturConversion
Error: Could not find or load main class TemperaturConversion
Caused by: java.lang.ClassNotFoundException: TemperaturConversion
apple@Arihants-MacBook-Pro Downloads % java TemperaturConversion
error: class names, 'TemperaturConversion', are only accepted if annotation processing is explicitly requested
1 error
apple@Arihants-MacBook-Pro Downloads % javac TemperaturConversion.java
TemperaturConversion.java:16: error: reached end of file while parsing
)
^
1 error
apple@Arihants-MacBook-Pro Downloads % javac TemperaturConversion.java
apple@Arihants-MacBook-Pro Downloads % java TemperaturConversion
Enter temperature in Celsius:
50
The 50.0 celsius is 122.0 Fahrenheit
apple@Arihants-MacBook-Pro Downloads % java TemperatureConversion2.java
Enter temperature in Fahrenheit:
44
The temperature 44.0 Fahrenheit is 6.66666666666667 Celsius.
apple@Arihants-MacBook-Pro:apple@Arihants-apple@Arihants-MacBook-Pro Downloads % java Totalincome.java
Enter salary:
50000
Enter bonus:
40
The income is 50000.0, the bonus is 40.0, and the total income is 50040.0.
apple@Arihants-MacBook-Pro Downloads %

```

4 . Create a program to swap two numbers

Hint =>

- Create a variable number1 and take user input.
- Create a variable number2 and take user input.
- Swap number1 and number2 and print the swapped output

I/P => number1, number2

O/P => The swapped numbers are ____ and ____

CODE-

```
import java.util.Scanner; // Import the Scanner class for user input
```

```
class Swappingnumbers { // Class name should follow Java naming conventions
(PascalCase)
```

```
public static void main(String[] args) {
```

```
    Scanner input = new Scanner(System.in); // Create a Scanner object for user input
```

```
// Prompt the user to enter the first number
System.out.println("Enter 1st number:");
double num1 = input.nextDouble(); // Read the first number from the user

// Prompt the user to enter the second number
System.out.println("Enter 2nd number:");
double num2 = input.nextDouble(); // Read the second number from the user

// Swapping the values of num1 and num2
double swap = num1; // Store num1 in a temporary variable
num1 = num2; // Assign num2 to num1
num2 = swap; // Assign the temporary value (original num1) to num2

// Display the swapped numbers
System.out.println("The swapped numbers are: " + num1 + ", " + num2);

input.close(); // Close the Scanner object to free resources
}

}
```

The terminal window shows the following session:

```

Last login: Mon Feb 17 08:27:58 on ttys000
apple@Arihants-MacBook-Pro ~ % -zsh
zsh: command not found: -zsh
apple@Arihants-MacBook-Pro ~ % cd /Users/apple/Downloads/
apple@Arihants-MacBook-Pro Downloads % java TemperaturConversion
Error: Could not find or load main class TemperaturConversion
Caused by: java.lang.ClassNotFoundException: TemperaturConversion
apple@Arihants-MacBook-Pro Downloads % javac TemperaturConversion.java
apple@Arihants-MacBook-Pro Downloads % java TemperaturConversion
Enter temperature in Celsius:
59
The 59.0 celsius is 122.0 Fahrenheit
apple@Arihants-MacBook-Pro Downloads % java TemperatureConversion2.java
Enter temperature in Fahrenheit:
44
The temperature 44.0 Fahrenheit is 6.666666666666667 Celsius.
apple@Arihants-MacBook-Pro Downloads % java Totalincome.java
Enter salary:
50000
Enter bonus:
40
apple@Arihants-MacBook-Pro Downloads % java Swappingnumbers.java
Enter 1st number:
57
Enter 2nd number:
89
The swapped numbers are: 89.0, 57.0
apple@Arihants-MacBook-Pro Downloads %

```

The code editor window shows the Java file `Totalincome.java`:

```

1 import java.util.Scanner; // Import Scanner class
2
3 class Totalincome { // Class name
4     public static void main(String[] args) {
5         Scanner input = new Scanner(System.in);
6
7         // Prompt the user to enter salary
8         System.out.println("Enter salary:");
9         double salary = input.nextDouble();
10
11         // Prompt the user to enter bonus
12         System.out.println("Enter bonus:");
13         double bonus = input.nextDouble();
14
15         // Calculate total income
16         double totalIncome = salary + bonus;
17
18         // Display the entered information
19         System.out.println("The total income is " + totalIncome);
20
21     }
22 }
23

```

5 . Rewrite the Sample Program 2 with user inputs

Hint =>

- Create variables and take user inputs for name, fromCity, viaCity, toCity
- Create variables and take user inputs for distances fromToVia and viaToFinalCity in Miles
- Create Variables and take time taken
- Finally, print the result and try to understand operator precedence.

I/P => fee, discountPrecent

O/P => The results of Int Operations are ___, ___, and ___

CODE-

```

import java.util.Scanner;

public class Trav {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter your name: ");
        String name = scanner.nextLine();
        System.out.print("Enter the starting city: ");
        String fromCity = scanner.nextLine();
        System.out.print("Enter the via city: ");
        String viaCity = scanner.nextLine();
    }
}

```

```
System.out.print("Enter the destination city: ");
String toCity = scanner.nextLine();
System.out.print("Enter the distance from starting city to via city (in miles): ");
double distanceFromToVia = scanner.nextDouble();
System.out.print("Enter the distance from via city to destination (in miles): ");double distanceViaToFinal =
scanner.nextDouble();
double totalDistance = distanceFromToVia + distanceViaToFinal;
System.out.print("Enter the total time taken for the journey (in hours): ");
double timeTaken = scanner.nextDouble();
System.out.print("Enter the travel fee: ");
double fee = scanner.nextDouble();
System.out.print("Enter the discount percentage: ");
double discountPercent = scanner.nextDouble();
double discountAmount = (fee * discountPercent) / 100;
double finalFee = fee - discountAmount;
double result1 = totalDistance / timeTaken + fee;
double result2 = fee - discountAmount * 2;
double result3 = (fee - discountAmount) * 2;
System.out.println("\n" + name + "
, your travel details are as follows:");
System.out.println("Route: " + fromCity + "
-> " + viaCity + "
-> " + toCity);
System.out.println("Total Distance: " + totalDistance + " miles");
System.out.println("Total Time Taken: " + timeTaken + " hours");
System.out.println("Original Fee: $" + fee);
System.out.println("Discount Applied: $" + discountAmount);
System.out.println("Final Fee After Discount: $" + finalFee);
System.out.println("The results of Int Operations are " + result1 + "
+
result3);
scanner.close();
" + result2 + "
, and "
}
}

Output:
```

```

1 import java.util.Scanner;
2
3 public class Input2{
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6         System.out.print("Enter your name: ");
7         String name = scanner.nextLine();
8         System.out.print("Enter the starting city: ");
9         String fromCity = scanner.nextLine();
10        System.out.print("Enter the via city: ");
11        String viaCity = scanner.nextLine();
12        System.out.print("Enter the destination city: ");
13        String toCity = scanner.nextLine();
14        System.out.print("Enter the distance from starting city to via city (in miles): ");
15        double distanceFromVia = scanner.nextDouble();
16        System.out.print("Enter the distance from via city to destination (in miles): ");
17        double distanceViaToFinal = scanner.nextDouble();
18        double totalDistance = distanceFromVia + distanceViaToFinal;
19        System.out.print("Enter the total time taken for the journey (in hours): ");
20        double timeTaken = scanner.nextDouble();
21        System.out.print("Enter the travel fee: ");
22        double fee = scanner.nextDouble();
23        System.out.print("Enter the discount percentage: ");
24        double discountPercent = scanner.nextDouble();
25        double discountAmount = (fee * discountPercent) / 100;
26        double finalFee = fee - discountAmount;
27        double result1 = totalDistance / timeTaken + fee;
28        double result2 = fee - discountAmount + 2;
29        double result3 = (fee - discountAmount) * 2;
30        System.out.println("\n" + name + ", your travel details are as follows:");
31        System.out.println("Route: " + fromCity + " -> " + viaCity + " -> " + toCity);
32        System.out.println("Total Distance: " + totalDistance + " miles");
33        System.out.println("Total Time Taken: " + timeTaken + " hours");
34        System.out.println("Original Fee: $" + fee);
35        System.out.println("Discount Applied: $" + discountAmount);
36        System.out.println("Final Fee After Discount: $" + finalFee);
37        System.out.println("The results of Int Operations are " + result1 + " " + result2 + " " + result3);
38        scanner.close();
39    }
40 }

```

```

3 errors
apple@Arihants-MacBook-Pro Downloads % javac input.java
apple@Arihants-MacBook-Pro Downloads % java input
Enter your name: ajaaj
enter num245
enter num355
The results of Int Operations are2509.1585.55and89
apple@Arihants-MacBook-Pro Downloads % javac input.java
error: invalid flag: input.java
Usage: javac <options> <source files>
use -help for a list of possible options
apple@Arihants-MacBook-Pro Downloads % javac input2.java
apple@Arihants-MacBook-Pro Downloads % java input2
Enter num1676
enter num289.9
enter num3960.66
The results of Int Operations are87039.334.61733.06000000005.968.17946607
34Mamangam@Arihants-MacBook-Pro ~ %
apple@Arihants-MacBook-Pro Downloads % javac input2t.java
error: file not found: input2t.java
Usage: javac <options> <source files>
use -help for a list of possible options
apple@Arihants-MacBook-Pro Downloads % javac input2t.java
error: file not found: input2t.java
Usage: javac <options> <source files>
use -help for a list of possible options
apple@Arihants-MacBook-Pro Downloads % javac input2t.java
error: file not found: input2t.java
Usage: javac <options> <source files>
use -help for a list of possible options
apple@Arihants-MacBook-Pro Downloads % javac input2t.java
input2t.java:3: error: cannot find symbol
Scanner scanner = new Scanner(System.in);
          ^
symbol:   class Scanner
location: class Input2
input2t.java:3: error: cannot find symbol
Scanner scanner = new Scanner(System.in);
          ^
symbol:   class Scanner
location: class Input2
2 errors
apple@Arihants-MacBook-Pro Downloads % javac input2.java
apple@Arihants-MacBook-Pro Downloads % java input2
Enter your name: ajaaj
Enter the starting city: banggarulu
Enter the via city: bolllore
Enter the destination city: cydhenmai
Enter the distance from starting city to via city (in miles): 678
Enter the distance from via city to destination (in miles): 9987
Enter the total time taken for the journey (in hours): 334
Enter the travel fee: 33
Enter the discount percentage: 43
ajaaj, your travel details are as follows:
Route: banggarulu,bollorre, cydhenmai
Total Distance: 10665.0 miles
Total Time Taken: 334.0 hours
Original Fee: $33.0
Discount Applied: $13.2
Final Fee After Discount: $18.80000000000002
The results of Int Operations are 64.9311377245509+ result3
apple@Arihants-MacBook-Pro Downloads %

```

6. An athlete runs in a triangular park with sides provided as input by the user in meters. If the

athlete wants to complete a 5 km run, then how many rounds must the athlete complete

Hint => The perimeter of a triangle is the addition of all sides and rounds is

distance/perimeter

I/P => side1, side2, side3

O/P => The total number of rounds the athlete will run is

to complete 5 km

Input:

```

import java.util.Scanner;
public class Athl {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter the length of side 1 (in meters): ");
        double side1 = scanner.nextDouble();
        System.out.print("Enter the length of side 2 (in meters): ");
        double side2 = scanner.nextDouble();
        System.out.print("Enter the length of side 3 (in meters): ");
        double side3 = scanner.nextDouble();
        double perimeter = side1 + side2 + side3;int totalRounds = (int) Math.ceil(5000 / perimeter);
        System.out.println("The total number of rounds the athlete will run is " + totalRounds + "
to complete 5 km.
");
        scanner.close();
    }
}

```

Output:

7. Create a program to divide N number of chocolates among M children.

Hint =>

- Get an integer value from user for the numberOfChocolates and numberOfChildren.
- Find the number of chocolates each child gets and number of remaining chocolates
- Display the results

I/P => numberOfChocolates, numberOfChildren

O/P => The number of chocolates each child gets is

and the number of remaining chocolates are

Input:

```
import java.util.Scanner;
public class Choco {
public static void main(String[] args) {
Scanner scanner = new Scanner(System.in);
System.out.print("Enter the number of chocolates: ");
int numberOfChocolates = scanner.nextInt();
System.out.print("Enter the number of children: ");
int numberOfChildren = scanner.nextInt();
int chocolatesPerChild = numberOfChocolates / numberOfChildren;
int remainingChocolates = numberOfChocolates % numberOfChildren;
System.out.println("The number of chocolates each child gets is " + chocolatesPerChild
" and the number of remaining chocolates are " + remainingChocolates +
"
");
scanner.close();
}
```

Output:

The screenshot shows a Java development environment with several tabs open in the background: basiccalc.java, area.java, side.java, and feet.java. In the foreground, a terminal window displays the execution of a Java program named choco.java. The terminal output shows the program's logic for dividing chocolates and the resulting console interaction.

```
symbol: class Scanner
location: class Input2
Input2.java:3: error: Cannot find symbol
Scanner scanner = new Scanner(System.in);
^
symbol: class Scanner
location: class Input2
2 errors
[apple@Arihants-MacBook-Pro Downloads % javac input2.java
[apple@Arihants-MacBook-Pro Downloads % java input2
Enter your name: arihants
Enter the starting city: bangarulu
Enter the via city: bollore
Enter the destination city: cvdhennal
Enter the distance from starting city to via city (in miles): 678
Enter the distance from via city to destination (in miles): 9987
Enter the total time taken for the journey (in hours): 334
Enter the travel fee: 39
Enter the discount percentage: 43
ajaj!, your travel details are as follows:
Route: bangarulu,bollore, cvdhennal
Total Distance: 16665.0 miles
Total Time Taken: 334.0 hours
Orignal Fee: $39
Discount Applied: $14.19
Final Fee After Discount: $18.819999999999992
The results of Int Operations are 64.9311377245589+ result3
[apple@Arihants-MacBook-Pro Downloads % javac chjoco.java
error: file not found: chjoco.java
Usage: javac <options> <source files>
use -help for a list of possible options
[apple@Arihants-MacBook-Pro Downloads % javac choco.java
choco.java:11: error: ';' or ')' expected
System.out.println("The number of chocolates each child gets is " + chocolatesPerChild
)
choco.java:10: error: not a statement
int remainingChocolates = numberOfChocolates % numberOfChildren;
^
choco.java:12: error: not a statement
" and the number of remaining chocolates are " + remainingChocolates );
choco.java:12: error: ';' expected
" and the number of remaining chocolates are " + remainingChocolates );
4 errors
[apple@Arihants-MacBook-Pro Downloads % javac choco.java
choco.java:2: error: class Choco is public, should be declared in a file named Choco.java
public class Choco {
^
1 error
apple@Arihants-MacBook-Pro Downloads % javac choco.java
[apple@Arihants-MacBook-Pro Downloads % java choco
Enter the number of chocolates: 78
Enter the number of children: 9
The number of chocolates each child gets is 8 and the number of remaining chocolates are 6
apple@Arihants-MacBook-Pro Downloads %
```

8. Write a program to input the Principal, Rate, and Time values and calculate Simple Interest.

Hint => Simple Interest = Principal * Rate * Time / 100

I/P => principal, rate, time

O/P => The Simple Interest is

for Principal
_____, Rate of Interest
and Time

Input:

```
import java.util.Scanner;
public class Simp {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter the Principal amount: ");
        double principal = scanner.nextDouble();
        System.out.print("Enter the Rate of Interest: ");
        double rate = scanner.nextDouble();
        System.out.print("Enter the Time period (in years): ");
        double time = scanner.nextDouble();
        double simpleInterest = (principal * rate * time) / 100;
        System.out.println("The Simple Interest is " + simpleInterest + " for Principal " +
            principal +
            ", Rate of Interest " + rate + " and Time " + time + "
        ");
        scanner.close();
    }
}
```

Output:

The screenshot shows a Java code editor with several tabs open, each containing a different Java file. The tabs include basiccalc.java, area.java, side.java, feet.java, simp.java, and input2.java. Below the tabs is a terminal window displaying the output of various Java commands and programs.

```

1 import java.util.Scanner;
2 public class simp {
3     public static void main(String[] args) {
4         Scanner scanner = new Scanner(System.in);
5         System.out.print("Enter the Principal amount: ");
6         double principal = scanner.nextDouble();
7         System.out.print("Enter the Rate of Interest: ");
8         double rate = scanner.nextDouble();
9         System.out.print("Enter the Time period (in years): ");
10        double time = scanner.nextDouble();
11        double simpleInterest = (principal * rate * time) / 100;
12        System.out.println("The Simple Interest is " + simpleInterest + " for Principal " +
13            principal + ", Rate of Interest " + rate + " and Time " + time );
14    scanner.close();
15 }
16 }

```

```

location: class input2
2 errors
[apple@Arihants-MacBook-Pro Downloads % javac input2.java
[apple@Arihants-MacBook-Pro Downloads % java input2
Enter your name: arijit
Enter the starting city: bangarulu
Enter the via city: bollore
Enter the destination city: cvdhenrai
Enter the distance from starting city to via city (in miles): 678
Enter the distance from via city to destination (in miles): 9987
Enter the total time taken for the journey (in hours): 334
Enter the fuel Gsl: 30
Enter the discount percentage: 43
ajajaj, your travel details are as follows:
Route: bangarulu,bollore,cvdhenrai
Total Distance: 10665.0 miles
Total Time: 334.0 hours
Original Fee: $30.0
Discount Applied: $14.19
Final Fee After Discount: $18.810000000000002
The results of Int Operations are 64.9311377245589+ result3
[apple@Arihants-MacBook-Pro Downloads % javac chjoco.java
error: file not found: chjoco.java
Usage: javac <options> <sourcefiles>
use -help for a list of possible options
[apple@Arihants-MacBook-Pro Downloads % javac choco.java
choco.java:11: error: ')' or '.' expected
System.out.println("The number of chocolates each child gets is " + chocol
atesPerChild
|
choco.java:10: error: not a statement
int remainingChocolates = numberOfChocolates % numberofChildren;^
choco.java:12: error: not a statement
" and the number of remaining chocolates are " + remainingChocolates );^
choco.java:12: error: ';' expected
" and the number of remaining chocolates are " + remainingChocolates );^
4 errors
[apple@Arihants-MacBook-Pro Downloads % javac choco.java
choco.java:2: error: class Choco is public, should be declared in a file n
amed Choco.java
public class Choco {
|
1 error
apple@Arihants-MacBook-Pro Downloads % javac choco.java
[apple@Arihants-MacBook-Pro Downloads % java choco
Enter the number of chocolates: 78
Enter the number of children: 9
The number of chocolates each child gets is 8 and the number of remaining
chocolates is 6
[apple@Arihants-MacBook-Pro Downloads % javac simp.java
[apple@Arihants-MacBook-Pro Downloads % java simp
Enter the Principal amount: 789
Enter the Rate of Interest: 9
Enter the Time period (in years): 7
The Simple Interest is 497.87 for Principal 789.0, Rate of Interest 9.0 an
d Time 7.0
apple@Arihants-MacBook-Pro Downloads %

```

9. Create a program to find the maximum number of handshakes among N number of students.

Hint =>

- Get integer input for `numberOfStudents` variable.
- Use the combination $= (n * (n - 1)) / 2$ formula to calculate the maximum number of possible handshakes.
- Display the number of possible handshakes

Input:

```

import java.util.Scanner;
public class Hand {
public static void main(String[] args) {
Scanner scanner = new Scanner(System.in);
System.out.print("Enter the number of students: ");
int numberOfStudents = scanner.nextInt();
int totalHandshakes = (numberOfStudents * (numberOfStudents - 1)) / 2;
System.out.println("The maximum number of handshakes among " +
numberOfStudents + " students is " + totalHandshakes +
");
scanner.close();
}

```

Output:

The screenshot shows a Java code editor with several tabs open, including basiccalc.java, area.java, side.java, feet.java, hand.java, and a terminal window. The terminal window displays the output of various Java programs:

```

Enter your name: ajajaj
Enter the starting city: banggarulu
Enter the via city: blore
Enter the destination city: cvdhennai
Enter the distance from starting city to via city (in miles): 678
Enter the distance from via city to destination (in miles): 9987
Enter the total time taken for the journey (in hours): 334
Enter the travel fee: 33
Enter the discount percentage: 43
ajajaj, your travel details are as follows:
Route: banggarulu,blore, cvdhennai
Total Distance: 1665.0 miles
Total Time Taken: 334.0 hours
Original Fee: $33.0
Discount Applied: $14.19
Final Fee After Discount: $18.810000000000002
The result of the operation is 64.9311377245509+ result3
[apple@Arihants-MacBook-Pro Downloads % javac chjoco.java
error: file not found: chjoco.java
Usage: javac <options> <source files>
use -help for a list of possible options
[apple@Arihants-MacBook-Pro Downloads % javac choco.java
choco.java:11: error: ';' or ',' expected
System.out.println("The number of chocolates each child gets is " + chocol
atesPerChild
 ^
choco.java:10: error: not a statement
int remainingChocolates = numberOfChocolates % numberofChildren; ^
choco.java:12: error: not a statement
" and the number of remaining chocolates are " + remainingChocolates );
choco.java:12: error: ';' expected
" and the number of remaining chocolates are " + remainingChocolates ^
4 errors
[apple@Arihants-MacBook-Pro Downloads % javac choco.java
choco.java:2: error: class Choco is public, should be declared in a file n
amed Choco.java
public class Choco {
 ^
1 error
apple@Arihants-MacBook-Pro Downloads % javac choco.java
[apple@Arihants-MacBook-Pro Downloads % java choco
Enter the number of chocolates: 78
Enter the number of children: 9
The number of chocolates each child gets is 8 and the number of remaining
chocolates are 6
[apple@Arihants-MacBook-Pro Downloads % javac simp.java
[apple@Arihants-MacBook-Pro Downloads % java simp
Enter the Principal amount: 789
Enter the Rate of Interest: 9
Enter the Time period (in years): 7
The Simple Interest is 497.07 for Principal 789.0, Rate of Interest 9.0 an
d Time 7.0
[apple@Arihants-MacBook-Pro Downloads % javac hand.java
[apple@Arihants-MacBook-Pro Downloads % java hand
Enter the number of students: 67
The maximum number of handshakes among 67 students is 2211.
apple@Arihants-MacBook-Pro Downloads %

```

Line 2, Column 15 Tab Size: 4 Java

10. Create a program to convert weight in pounds to kilograms.

Hint => 1 pound = 2.2 kg

5

I/P => weight

O/P => The weight of the person in pound is

and in kg is

Input:

```

import java.util.Scanner;
public class Weigh {
public static void main(String[] args) {
Scanner scanner = new Scanner(System.in);
System.out.print("Enter the weight in pounds: ");
double weightInPounds = scanner.nextDouble();
double weightInKg = weightInPounds / 2.2;
System.out.println("The weight of the person in pounds is " + weightInPounds + " and in
kilograms is " + weightInKg +
");
scanner.close();
}
}

```

Output:

A screenshot of a Java development environment showing several tabs open and a terminal window displaying the output of various Java programs.

The tabs shown are:

- basiccalc.java
- area.java
- side.java
- feet.java
- weight.java

The terminal window displays the following outputs:

```
Enter the distance from via city to destination (in miles): 9987
Enter the total time taken for the journey (in hours): 334
Enter the discount percentage: 43
ajajaj, your travel details are as follows:
Route: bammgarulu,bollore,cvdennai
Total Distance: 10665.0 miles
Total Time Taken: 334.0 hours
Original Fee: $18.81
Discount Applied: $14.19
Final Fee After Discount: $18.810000000000007
The results of Int Operations are 64.9311377245589+ result3
[apple@Arihants-MacBook-Pro Downloads % javac chjoco.java]
error: file not found: chjoco.java
Usage: java <options> <source files>
use --help for a list of possible options
[apple@Arihants-MacBook-Pro Downloads % javac choco.java
choco.java:11: error: ) or . expected
System.out.println("The number of chocolates each child gets is " + chocol
atesPerChild
^
choco.java:10: error: not a statement
int remainingChocolates = numberOfChocolates % numberofChildren; ^
choco.java:12: error: not a statement
" and the number of remaining chocolates are " + remainingChocolates );
^
choco.java:12: error: ';' expected
" and the number of remaining chocolates are " + remainingChocolates );
^
4 errors
[apple@Arihants-MacBook-Pro Downloads % javac choco.java
choco.java:2: error: class Choco is public, should be declared in a file n
amed Choco.java
public class Choco {
^
1 error
[apple@Arihants-MacBook-Pro Downloads % javac choco.java
[apple@Arihants-MacBook-Pro Downloads % java choco
Enter the number of chocolates: 78
Enter the number of children: 9
The number of chocolates each child gets is 8 and the number of remaining
chocolates are 6
[apple@Arihants-MacBook-Pro Downloads % javac simp.java
[apple@Arihants-MacBook-Pro Downloads % java simp
Enter the Principal amount: 789
Enter the Rate of Interest: 9
Enter the Time period (in years): 7
The Simple Interest is 497.07 for Principal 789.0. Rate of Interest 9.0 an
d Time 7.0
[apple@Arihants-MacBook-Pro Downloads % javac hand.java
[apple@Arihants-MacBook-Pro Downloads % java hand
Enter the number of students: 67
The maximum number of handshakes among 67 students is 2211.
[apple@Arihants-MacBook-Pro Downloads % javac weight.java
[apple@Arihants-MacBook-Pro Downloads % java weight
Enter the weight in pounds: 789
The weight of the person in pounds is 789.0 and in kilograms is 358.636363
6363636
apple@Arihants-MacBook-Pro Downloads %
```