PG - DAC Sept 2023
C++ Programming
Assignment - 2(Date:19/09/2023)

1.Write a in C++ program to find the size of fundamental data types.
Sample Output:
Find Size of fundamental data types :

The sizeof(char) is : 1 bytes
The sizeof(short) is : 2 bytes
The sizeof(int) is : 4 bytes
The sizeof(long) is : 8 bytes
The sizeof(long long) is : 8 bytes
The sizeof(float) is : 4 bytes
The sizeof(double) is : 8 bytes
The sizeof(long double) is : 16 bytes
The sizeof(bool) is : 1 bytes

2.Write a program in C++ to print the sum of two numbers using variables.
Print the sum of two numbers :

The sum of 29 and 30 is : 59

3.Write a C++ program that displays mixed data types and arithmetic operations.
Sample output:
Display arithmetic operations with mixed data type :
---
5 + 7 = 12
3.7 + 8.0 = 11.7

5 + 8.0 = 13.0
5 - 7 = -2
3.7 - 8.0 = -4.3
5 - 8.0 = -3.0
5 * 7 = 35
3.7 * 8.0 = 29.6
5 * 8.0 = 40.0
5 / 7 = 0
3.7 / 8.0 = 0.5
5 / 8.0 = 0.6

4. Write a C++ program to print the results of the specified operations.
Sample Output:
Print the result of some specific operation :

---
1. -1+4*6
2. **35+5%7**
3.14+-4*6/11
4.2+15/6*1-7%2
Result of 1st expression is : 23
Result of 2nd expression is : 5
Result of 3rd expression is : 12
Result of 4th expression is : 3

5. Write a C++ program to add two numbers and accept them from the keyboard.
Sample Output:
Sum of two numbers :

Input 1st number : 25
Input 2nd number : 39
The sum of the numbers is : 64

6.Write a C++ program that swaps two numbers.
Sample Output:

Swap two numbers :

Input 1st number : 25
Input 2nd number : 39
After swapping the 1st number is : 39
After swapping the 2nd number is : 25

7.Write a C++ program that calculates the volume of a sphere.
Sample Output:
Calculate the volume of a sphere :

Input the radius of a sphere : 6
The volume of a sphere is : 904.32

8. Write a C++ program that calculates the volume of a cube.
Sample Output:
Calculate the volume of a cube :

Input the side of a cube : 5
The volume of a cube is : 125

9.Write a C++ program that calculates the volume of a cylinder.
Sample Output:
Calculate the volume of a cylinder :

Input the radius of the cylinder : 6
Input the height of the cylinder : 8
The volume of a cylinder is : 904.32

10.Write a C++ program to find the Area and Perimeter of a Rectangle.
Sample Output:
Find the Area and Perimeter of a Rectangle :

Input the length of the rectangle : 10
Input the width of the rectangle : 15

The area of the rectangle is : 150
The perimeter of the rectangle is : 50

11.Write a C++ program to find the area and circumference of a circle.
Sample Output:
Find the area and circumference of any circle :

Input the radius(1/2 of diameter) of a circle : 5
The area of the circle is : 78.5397
The circumference of the circle is : 31.4159

12.Write a C++ program to convert temperature in Celsius to Fahrenheit.
Sample Output:
Convert temperature in Celsius to Fahrenheit :

Input the temperature in Celsius : 35
The temperature in Celsius : 35
The temperature in Fahrenheit : 95

13.Write a C++ program to convert temperature in Fahrenheit to Celsius.
Sample Output:
Convert temperature in Fahrenheit to Celsius :

Input the temperature in Fahrenheit : 95
The temperature in Fahrenheit : 95
The temperature in Celsius : 35

14.Write a C++ program to find the third angle of a triangle.
Sample Output:
Find the third angle of a triangle :

Input the 1st angle of the triangle : 30
Input the 2nd angle of the triangle : 60
The 3rd of the triangle is : 90

15.Write a program in C++ that converts kilometers per hour to miles per hour.
Sample Output:
Convert kilometers per hour to miles per hour :

Input the distance in kilometer : 25
The 25 Km./hr. means 15.5343 Miles/hr.

16.Write a program in C++ to convert temperature in Kelvin to Fahrenheit.
Sample Output:
Convert temperature in Kelvin to Fahrenheit :

Input the temperature in Kelvin : 300
The temperature in Kelvin : 300
The temperature in Fahrenheit : 80.33

17.Write a C++ program to compute the quotient and remainder.
Sample Output:
Compute quotient and remainder :

Input the dividend : 25
Input the divisor : 3
The quotient of the division is : 8
The remainder of the division is : 1

18.Write a C++ program to compute the total and average of four numbers.
Sample Output:
Compute the total and average of four numbers :

Input 1st two numbers (separated by space) : 25 20
Input last two numbers (separated by space) : 15 25
The total of four numbers is : 85
The average of four numbers is : 21.25

19. Write a program in C++ to check whether a number is positive, negative or zero.
Sample Output:
Check whether a number is positive, negative or zero :

Input a number : 8
The entered number is positive.

20.Write a program in C++ to divide two numbers and print them on the screen.
Sample Output:
Divide two numbers and print:

The quotient of 30 and 10 is : 3

21.Write a C++ program to display the current date and time.
Sample Output:
Display the Current Date and Time :
---
seconds = 57
minutes = 33
hours = 12
day of month = 6
month of year = 7
year = 2017
weekday = 4
day of year = 186
daylight savings = 0
Current Date: 6/7/2017
Current Time: 12:33:57

22. Write a program in C++ to compute the specified expressions and print the output.
Sample Output:
Compute the specified expressions and print the output:

Result of the expression (25.5 * 3.5 - 3.5 * 3.5) / (40.5 - 4.5) is : 2.13889

23.Write a C++ program that takes a number as input and prints its multiplication table up to 10.
Sample Output:
Print the multiplication table of a number upto 10:

Input a number: 5
5 x 1 = 5
5 x 2 = 10
5 x 3 = 15
5 x 4 = 20
5 x 5 = 25
5 x 6 = 30
5 x 7 = 35
5 x 8 = 40
5 x 9 = 45
5 x 10 = 50

24.Write a C++ program to compute the sum of two given integer values. If the two values are the same, then return triple their sum.
Sample Input
1, 2
3, 2
2, 2
Sample Output:
3
5
12

25.Write a C++ program to check a given integer and return true if it is within 10 of 100 or 200.
Sample Input:
103
90

89
Sample Output:
1
1
0