



PG - DAC Sept 2023
C++ Programming
Assignment - 5(Date:22/09/2023)

1. Write a C++ program to implement a class called Circle that has private member variables for radius. Include member functions to calculate the circle's area and circumference.
2. Write a C++ program to create a class called Rectangle that has private member variables for length and width. Implement member functions to calculate the rectangle's area and perimeter.
3. Write a C++ program to create a class called Person that has private member variables for name, age and country. Implement member functions to set and get the values of these variables.
4. Write a C++ program to create a class called Car that has private member variables for company, model, and year. Implement member functions to get and set these variables.
5. Write a C++ program to implement a class called BankAccount that has private member variables for account number and balance. Include member functions to deposit and withdraw money from the account.
6. Write a C++ program to create a class called Triangle that has private member variables for the lengths of its three sides. Implement member functions to determine if the triangle is equilateral, isosceles, or scalene
7. Write a C++ program to implement a class called Employee that has private member variables for name, employee ID, and salary. Include member functions to calculate and set salary based on employee performance.
8. Write a C++ program to implement a class called Student that has private member variables for name, class, roll number, and marks. Include member functions to calculate the grade based on the marks and display the student's information.

9. Write a C++ program to divide two integers (dividend and divisor) without using the multiplication, division and mod operators.

Dividend 7 Divisor 2

Result: 3

Dividend -17 Divisor 5

Result: -3

10. Write a C++ program to find the sum of all elements in an array using recursion.

11. Write a C++ program to calculate the factorial of a given number using recursion.

12. Write a C++ program to implement a recursive function to calculate the power of a number.

13. Write a C++ program to implement a recursive function to find the maximum and minimum elements in an array.

14. Write a C++ program to implement a recursive function to calculate the power of a number.

15. Write a C++ program to compute the number of days in a month for a given year and month.

Input Year: 2019

Input Month: 04

Number of days of the year 2019 and month 4 is: 30