**LAB ASSIGNMENT REPORT**

**On**

**(BCA 356 “OOPS & C++ Lab”)**



**Faculty of engineering**

**& computing sciences**

**TMU, MORADABAD**

**Session: June.2021 – Dec. 2021**

**Submitted To:** **Submitted By:**

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**(Assistant Professor) Enrollment No.**

**Course:**

**Semester:**

**Lab Assignment-1**

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| **S.NO** | **PROGRAM NAME** | **PAGE NO** | **DATE** | **SIGN** | **REMARK** |
|  | Write a program in C++ to swap two numbers without using the third variable. |  |  |  |  |
|  | Generate Fibonacci series as per given range which is entered by the user. |  |  |  |  |
|  | Perform the logic of perfect number. |  |  |  |  |
|  | Write a C++ program to find total number of days in given month of year. |  |  |  |  |
|  | Write a C++ program to calculate by using Class.   1. Area of circle (area=3.14 \* r2) 2. Circumference of the circle (c=2 \* 3.14 \* r) 3. Volume of the cylinder ( v=3.14 \* r2 \* h) 4. Surface area of the closed cylinder ( s = 2 \* 3.14 \* r \* h + 2 \* 3.14 \* r2 ) |  |  |  |  |
|  | If the three sides of a triangle are entered through the keyboard, write a program to check whether the triangle is isosceles, equilateral, scalene or right angled triangle. |  |  |  |  |
|  | Write a C++ program to reverse a number. |  |  |  |  |
|  | The distance between two cities (in Km) is input through the keyboard. Write a C++ program to convert and print this distance in meter, feet, inches and centimeter. |  |  |  |  |
|  | Print all the prime number between 1 to 300. |  |  |  |  |
|  | Write a program in C++ to perform operation of call by reference and call by address using function. |  |  |  |  |
|  | Write a program in C++ to find the factorial of the given number using the recursive function. |  |  |  |  |
|  | Write a Program in C++ to demonstrate working of Reference Variable. |  |  |  |  |

**Lab Assignment-2**

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| **S.NO** | **PROGRAM NAME** | **PAGE NO** | **DATE** | **SIGN** | **REMARK** |
|  | Write a CPP Program to assign data to the data members of a class such as day, month, year and to display the contents on the screen. |  |  |  |  |
|  | Write a CPP program to read time in seconds and convert in time format (HH:MM:SS) using class. |  |  |  |  |
|  | Write a CPP Program to read students particular such as roll number, age, gender, height and weight from the keyboard and display the content of the class on the screen. The class ‘Student’ is defined as an array of class objects. |  |  |  |  |
|  | Write a CPP Program to demonstrate of the **constructor**: **default Constructor, Parameterized Constructor, copy constructor.** |  |  |  |  |
|  | Write a CPP Program to destroy the object of class, the **destructor** member function is defined. |  |  |  |  |
|  | Write a CPP program to demonstrate of working of **inline member function**. |  |  |  |  |
|  | Write a CPP program to display how many instantiation of a class object has been created using **static data member** declaration. |  |  |  |  |
|  | A program to demonstrate how a static data is accessed by a **static member function.** |  |  |  |  |
|  | Write a C++ program consists of a base class and derived class. The base class data members are name, roll number and sex. The derived class data members are height and weight. The member functions are used to get information on the derived class from the keyboard and display the contents on the screen. |  |  |  |  |
|  | Write a C++ program to demonstrate how ambiguity is avoided in single inheritance using scope resolution operator. |  |  |  |  |

**Lab Assignment-3**

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| **S.NO** | **PROGRAM NAME** | **PAGE NO** | **DATE** | **SIGN** | **REMARK** |
|  | Write a CPP program to demonstrate of Friend Function. |  |  |  |  |
|  | A program to calculate the sum of private data of the class first with private data of another class second through the common friend function. |  |  |  |  |
|  | A program to demonstrate how a class first has granted its friendship to the class second to access the private data of the class first through the public member function of the class second. |  |  |  |  |
|  | Write a CPP program to implement function overloading. |  |  |  |  |
|  | WAP in C++ to overload + operator on string. |  |  |  |  |
|  | WAP in C++ to overload = operator on string. |  |  |  |  |
|  | WAP in C++ to overload == operator on string. |  |  |  |  |
|  | Depict the concept of virtual base class using a program. |  |  |  |  |
|  | WAP in C++ to demonstrate the working of virtual functions. |  |  |  |  |
|  | WAP in C++ to demonstrate the working of Pure virtual functions. |  |  |  |  |
|  | WAP in to accepts a string of characters and write it into a file then display the content of the file on the screen. |  |  |  |  |
|  | Write a C++ program to write and read text in/from file. |  |  |  |  |
|  | Write a C++ program to demonstrate example of tellg() and tellp() function. |  |  |  |  |