

# Object Oriented Programming

## Term Project

### BSCS-2A/2B – Fall 2021

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You need to develop a complete working application in C++ as a part of your term project. This can be an **individual project** or can be carried out in **groups of maximum two individuals**. It is expected that the developed application is an Object-Oriented solution to a problem employing the maximum concepts of Object-Oriented Programming.

You are free to take 'help' (and not copy+paste) from the Internet and other resources as long as you clearly refer to them in your program(s).

Properly comment your program and use good programming practices (Proper indenting, meaningful variable and function names etc.)

#### **Submission Requirements:**

The project is to be submitted in the form of a technical report along with the complete source code as an Annexure. Screen shots reflecting the working of the project are also welcome. The report should contain a description of your project and the **class diagram**. The class diagram must list all the classes (with their data members and member functions) as well as the relation between different classes (Composition, Inheritance etc.). You can use any online tool to create the class diagrams (For example: <https://app.diagrams.net/> or <https://online.visual-paradigm.com/> ).

Please note that the scale of the project should be at least 3-4 times that of a regular assignment and same weightage will be given in the evaluation. The project will contribute both to the theory and lab marks hence you are requested to put a good effort in developing the project.

#### **Submission Dates:**

Title of the project should be submitted by **December 20, 2021** at:

[https://forms.office.com/Pages/ResponsePage.aspx?id=bAnfdXKL5Eibkcv3nYfuOp1\\_TaGKQl1Bi4jb9\\_n-7V9UMFRQTFMwT0VXTEJDOFYxV0o3UzBKWVE2My4u](https://forms.office.com/Pages/ResponsePage.aspx?id=bAnfdXKL5Eibkcv3nYfuOp1_TaGKQl1Bi4jb9_n-7V9UMFRQTFMwT0VXTEJDOFYxV0o3UzBKWVE2My4u)

Project report and source code to be submitted as a single PDF file on LMS by **23<sup>rd</sup> January 2022.**

**Catalog:**

In an attempt to facilitate the choice of term projects, please find below few example problems that you could pick. The provided list by no means is exhaustive and the sole purpose of this document is to give you an idea about the scope expected from the project. You are free to pick any of these and discuss the requirements further or pick any other project of your own choice provided the scale/scope is at least 3-4 times the scale of your regular assignments.

Some example problems are listed in the following.

- A matrix manipulation system.
- Management Systems for Organizations or Businesses
- An event management application to assist event managers in scheduling and organization of events.
- Application to enter, edit, store and retrieve information regarding any of Sportsmen, Flights, Theaters/Movies, Exams, Documents/Books etc.
- A system to manipulate and convert between different number systems with rich features for the binary numbers
- A program to manipulate different Mathematical functions/series.
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