Object-Oriented Programming and Design - Monsoon 2025
Assignment 2 – Concepts of Object-Oriented Programming

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This assignment carries a total of 100 marks. There are three questions. Additional instructions given at the end of this question need to be followed. Note that use of any C++ library is NOT allowed. The concepts of data abstraction, data hiding and abstraction MUST be used wherever necessary. Error checking of inputs is essential.

1. A bib file is used to keep track of a list of publications. A basic C code is given to parse, read and identify the bib file. Convert it into C++, while ensuring (i) that OOP principles are followed, (ii) additional details namely URL of the PDF, URL of the source code, URL of the presentation, are retained, and (iii) problems such as fixed string lengths and C-style strings are removed.

2. Print the list of publications in ¡year, alphabetical¿ sequence, where the years are considered in descending sequence, but alphabetical is done in lexicographic sequence. Note that this requires you to implement the "¡" operator.

3. In addition, ensure that your data structure can add other entries a different bib file, using the "+" operation. Note that such additions should be in the form of a list. You should have the required constructors and destructors.

What and How To Submit

- The C++ and Makefile.

- Private github repository with the timestamps before the submission deadline. The repository should not have binary or library files committed at any stage; nor should they be added to the zip upload.

- A readme text file, describing the assignment and technique of building.

- At least three **different** C++ files for each of the three classes. The main function can be either in a separate file or in one of the class files.

- Utilization of standard C/C++ libraries, templates and template libraries are not allowed.

- Checks on input for validity (whether age is number, etc) is compulsory. Use of operator overloading is compulsory. Furthermore, unnecessary public variables and public functions are not allowed.

- Make the assigned TA the admin of the github repository, **and** submit the same code in zipped form on Google Classroom by the due date.