

# Assignment 05

Spring 2023 OOP (due: 04-12-23)

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To manage data in binary files using python language, `struct_pack` and `struct_unpack` functions are useful for fixed length records. You need to learn them correctly and completely.

In this assignment you need to develop a program to manage data in **binary** files for two type of objects, the students data (roll number: str of length 11, name: str of length 30, department code: str of length 2, semester: int, last semester percent marks: float, phone number: str of length 11) and grades data for courses enrolled in current semester (course: str of length 20, roll number: str of length 11, and percent marks: float).

The data management system should have the following functionalities:

1. QUIT the management system
2. Add a student (check for NO duplicates)
3. View student by roll no
4. Edit student by roll no (check for NO duplicates)
5. Delete student by roll no
6. List student by semester
7. List students by name
8. Print students list
9. Add grade of a student for a course (check for NO duplicates)
10. Import grades for a course for many students from a TABed text file (NO DUPS)
11. View grades of a student
12. Edit grades of a student for a course (NO DUPS, SKIP IF TIME IS SHORT)
13. Delete grades of a student for a course (SKIP IF TIME IS SHORT)
14. List Student wise (1 student) grade of courses
15. List Course wise grade (1 course) of students
16. Award sheet (courses one by one, with students enrolled in it)
17. Summary sheet (courses info, one by one, with one line for each student in it)
18. Transcripts for a range of students