

File Processing

1. Develop an implementation package using 'C' program to process a FILE containing student details for the given queries.

A student record has the following format:

Std_rollno, Std_name, Dept, C1, C1_c, C1_g, C2, C2_c, C2_g, C3, C3_c, C3_g

Note: C1 refers to Course1, C1_c refers to credit of the course, C1_g refers to the grade in that course and so on.

Every student should have a unique rollno.

A student should have at least 3 courses and maximum four.

A grade point is in integer: S - 10; A - 9; B - 8; C - 7; D - 6; E - 5; F - 0.

Create a file and develop a menu driven system for the following queries.

- a. Insert at least 5 student records.
- b. Create a column 'GPA' for all the students.
- c. For a student with four courses, delete(deregister) a course name.
- d. For the same student you deleted in 'c', insert a new course name.
- e. Update the name of a course for two different students.
- f. Calculate GPA of all students using the GPA formula. Refer the following:
https://www.nitt.edu/home/academics/rules/BTech_Regulations_2019.pdf
- g. Upgrade the grade point of a student who has secured '7' in a course.
- h. Calculate the updated GPA of the student in 'g'.
- i. Generate a Grade report of a student given the roll no. or name.

Structured Query Language (SQL) DDL Commands

1. Create a Student schema using the student details given in Q.No.1 and execute the following basic queries.

Note: When defining the schema, exclude the following columns: Course_credit and Course_grade for all the courses.

Make sure you have the following constraints: Course is declared in char datatype.

DoB should be in date (dd/mm/yyyy) format. Provide a not-null constraint for dob.

Email should have the following format: xxx@nitt.edu

- a. Insert at least 5 student records into the Student table.
- b. Delete Course2 and Course3 attributes from the Student table.
- c. Insert two new columns DoB and email into the Student table.
- d. Change Course1 datatype to varchar2.
- e. Update the column name 'Std_rollno' to 'Std_rno'.
- f. Update all student records who pursue a course named "DBMS" to "OS".
- g. Delete a student record with student name starting with letter 'S'.
- h. Display all records in which a student has born after the year 2005.
- i. Simulate RENAME, COMMENT, TRUNATE and DROP.

---THE END---