

CSLR51 – Database Management Systems Laboratory

Session: 2

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.

Inserting Student Record

Terminal

```
PS C:\Users\HARIK\OneDrive\Desktop\DesktopIn\Semester 5\DBMS Lab> gcc Lab_2.c
PS C:\Users\HARIK\OneDrive\Desktop\DesktopIn\Semester 5\DBMS Lab> ./a.exe
1. Insert student record
2. Create GPA column
3. Delete course
4. Insert course
5. Update course name
6. Calculate GPA for all students
7. Upgrade grade
8. Upgrade GPA for a student
9. Generate grade report
10. Exit
Enter your choice: 1
Enter roll number: 106122006
Enter name: Hari
Enter department: CSE
Enter number of courses (3 to 4): 3
Enter name of Course 1 DBMS
Enter credits of Course 1 3
Enter grade of Course 1 A
Enter name of Course 2 OS
Enter credits of Course 2 3
Enter grade of Course 2 S
Enter name of Course 3 DSA
Enter credits of Course 3 3
Enter grade of Course 3 A
Student data added to file studentData.txt.
```

5 Student Records

```
studentData.txt
1  +-----+-----+
2  | Student: 106122006 (Hari)
3  +-----+-----+
4  | DBMS      | A |
5  | OS        | S |
6  | DSA       | A |
7  +-----+-----+
8  | GPA       | 9.33 |
9  +-----+-----+
10 +-----+-----+
11 | Student: 106122008 (Akash)
12 +-----+-----+
13 | DBMS      | S |
14 | OS        | S |
15 | DSA       | S |
16 +-----+-----+
17 | GPA       | 10.00 |
18 +-----+-----+
19 +-----+-----+
20 | Student: 106122010 (Joshi)
21 +-----+-----+
22 | DBMS      | B |
23 | OS        | B |
24 | DSA       | A |
25 | Hindi     | S |
26 +-----+-----+
27 | GPA       | 8.85 |
28 +-----+-----+
29 +-----+-----+
30 | Student: 106122012 (Ram)
31 +-----+-----+
32 | DBMS      | C |
33 | OS        | C |
34 | DSA       | S |
35 +-----+-----+
36 | GPA       | 8.00 |
37 +-----+-----+
38 +-----+-----+
```

```
+-----+-----+
| Student: 106122012 (Tom)
+-----+-----+
| DBMS      | A |
| OS        | S |
| DSA       | A |
+-----+-----+
| GPA       | 9.33 |
+-----+-----+
```

Report Card of Student

```
Enter your choice: 9
Enter roll number: 106122006
Report Card 106122006:
+-----+-----+
| Course | Grade |
+-----+-----+
| DBMS   | A     |
| OS     | A     |
| DSA    | A     |
+-----+-----+
| CGPA   | 9.00  |
+-----+-----+
1. Insert student record
2. Create GPA column
3. Delete course
4. Insert course
5. Update course name
6. Calculate GPA for all students
7. Upgrade grade
8. Upgrade GPA for a student
9. Generate grade report
10. Exit
Enter your choice: |
```

Deleting Course

```
Enter your choice: 3
Enter roll number: 106122006
Enter course name: DBMS
Course DBMS deleted for student 106122006.
Student data saved to file studentData.txt.
```

```
+-----+-----+
| Student: 106122006 (Hari)
+-----+-----+
| OS      | A  |
| DSA     | A  |
+-----+-----+
| CGPA    | 9.00 |
+-----+-----+
```