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I have done all the tasks of level 1 and level 2 .

For this problem you can give your own file name and place that file in project\_name/project\_name folder.

And that will read the entire data and stores it in data structures and file will be closed.

**Data Structures used:**

SLL to store all the details of a Student like key(System assigned), name,marks,Totalmarks(Calculated).

I used an array to store addresses of each node, In some functions if we know the key we can directly point to that node.

A BST is constructed for leader board purpose based on total marks. For leaderboard we can directly print RNL.

One 2D character Array to store subject names.

**Constructing SLL:**

First we will read the first line and calculate no of subjects from that line.

Second line is scanned and individual subject names are separated and stored in 2D character array

Then for each iteration we will scan two lines, first line is student name and second line marks line, If there is any error like Student name or marks are missing then that error is handled.

From marks line individual marks are separated and converted them to integer values and stored in the array and total marks are calculated from that array and from this details sll node is constructed.

Struct student\_node{

Int key;

Char studentname[100];

Int \*marks;

Struct student \*next; };

**The Features Supported By this project**

1.view student names and marks

2.view individual student names

3.view individual subject marks

4.view maximum marks a student got in all subjects

5.change names of the student

6.change marks of the student

7.Add student and marks

8.view particular student particular subject marks

9.delete student and his data

10.view leader board of the student

11.execute queries like total >100 etc

12.Show students whose data is missing

13.view average marks of all students

In view student marks and view leader board there is no sync between subjects and marks

Note: Inorder to save the data you are adding or modifiying don’t close console by clicking on close button .Do close with instructions.