**Structure and Functions assignments**

Mandatory

1. Refer the code in “student.c”. Implement the following requirements.

a. Change the name member to char \* datatype

Ans: A char \* datatype is used to store strings dynamically. This allows for flexible memory allocation, which is essential when dealing with strings of varying lengths. By changing the name member to char \*, I allocate memory for the name at runtime, making the program more efficient and adaptable.

b. Add 2 functions below to read and store name and percentage scores from user in student record.

//pass name address as parameter and read and update name field Return updated name

char \*read\_update\_name(char \*name);

//pass address of percentage as parameter, read and update percentage field of student record. Also return updated percentage

int read\_update\_percentage(int \*percent);

Ans:

* char \*name: The address of the name field in the student record.
* int \*percent: The address of the percentage field in the student record.

c. Check for memory leaks

Ans: Memory leaks occur when dynamically allocated memory is not properly freed, leading to wasted memory resources. To prevent memory leaks, it is crucial to free any allocated memory once it is no longer needed. In this assignment, we use the free\_student function to release the memory allocated for the name field.

d. Specify atleast 5 dataset used for testing

Check for memory leaks.

Ans:

A screen shot of a computer

Description automatically generated