Problem 1 Solution Description:

There are three parts in my code as follows:

1. **File Handling:** I have used read system call to read data from the file "student_records.csv" , which if returns -1 means that the file has not opened successfully and shows an error.

   To further read from the file I have used the strtok() function to split the string whenever it encounters "," or "\n".

   Now there are two variables row and column initialized to 0 and column is incremented at every iteration, whenever the column count becomes 8 and have set the column to 0 and increased the value of row by 1.

   I have used an integer array of size 6 initialized to 0 with each entry corresponding to an assignment. If the section matches with the section I want to find out, I update the number of students in that section and then the marks are added to corresponding entries in the array.

   Finally, each entry in the array is divided by the number of students in that section and printed on the screen using printf();

2. **Fork System Call:** to create a child process, I have used the fork system call and if fork() returns -1 then there is an error in the creation of the child process and the code exits, otherwise if the fork() returns 0 it prints the average in section A using the method described above.Once this is completed the the child process calls exit system call and all this while parent process is waiting using the waitpid() system call.Similarly, once parent process starts executing it prints prints the average in section B using the method described above.
   Note: I have printed all the process ids using getpid() function

3. **Threads:** In the second part, I have created two threads using pthread_create and pthread_join which returns 0 when thread is successfully created and joined respectively, otherwise have shown an error message and terminated the program.There are global variables to store the averages, in thread 1 calculates the average in section A whereas thread 2 calculates the average in section B and finally when threads are executed the main function prints the averages in section A, section B and Section A and B.

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