

Practice Exercises on files

Canvas: File Exercise #4

A) Preliminaries [Recall File operations: fopen(), fclose(), fread(), fwrite(), and fseek()]

fopen() and fclose()	
<pre>FILE* fopen(const char *filename, const char *mode);</pre> <pre>FILE *fp; fp = fopen("test.dat", "ab"); if (fp != NULL) { /* Do file operations HERE */ fclose(fp); }</pre>	<p>The diagram illustrates the state of a file pointer. A pink box labeled 'fp' has an arrow pointing to a yellow box labeled 'test.dat'. Below 'test.dat' is a horizontal row of five yellow boxes labeled 'r1', 'r2', 'r3', 'r4', and 'r5', representing the records in the file.</p>

B) Problem Specification: Create the program (named: **updatefile.c**) that will read the student records from the file 1 at a time and update the course field from a given old course to a given new course and the student record is rewritten back to the file overwriting the old copy. Note that the only aggregate structure is the student record.

The program has at least 3 functions with specification below.

Function	Specification
displayHeader()	Same as File Exercise #1. Complete code is given.
displayStudent()	Same as File Exercise #1
updateFile()	<p>Given an old course and new course as parameters, the function will read the contents of a file 1 record at a time and whose name will be inputted by the user. If the course field of the current read student record is equivalent to the old course, course is updated to new course. Changes will right away be reflected to the external file by writing the updated student record to the file. Hint: fseek() is needed here.</p> <p>Checking: Run readfile.c (created in Exercise #1) to check if the newly created data file is not garbage.</p>