Laboratory Week: 21 – 25 April 2025

Topic   **:** Input/Output

Program-1   : File concatenate (fcat.c)

Definition   : The program concatenates any number of files by writing them to standard output, one after the other, with no break between files. The program should issue an error message if any file cannot be opened.

Hint: Since it has no more then one file open at a time, the program needs only a single file pointer variable. Once it's finished with a file, the program can use the same variable when it opens the next file.

Program-2   : Display date (display_date.c)

Definition   : The program that rads a date from the command line and displays it in the following form: April 26, 2021. Allow the user to enter the date as either 2-26-2021 or 2/26/2021; you may assume that there are no spaces in the date. Print an error message if the date does not have one of the specified forms.

Hint: Use *sscanf* to extract the month, day, and year from the command-line argument.

Program-3   : Inventory2 (inventory2.c)

Definition   : Modify the *inventory2.c* program of Laboratory 9 by adding two new operations:

➢ Save the database in a specified file.
➢ Load the database from a specified file.

Use the codes *d* (dump) and *r* (restore), respectively, to represent these operations. The interaction with the user should have the following appearance:

```
Enter operation code: d
Enter name of output file: inventory.dat

Enter operation code: r
Enter name of output file: inventory.dat
```

Since the part structures are not stored in an array, *d* operation can not save them all by a single call of *fwrite*. Instead, it will need to visit each node in the linked list, writing the part number, part name, and quantity on hand to a file. (Don't save the next pointer; it won't be valid once the program terminates.) As it reads parts from a file, the *r* operation will rebuild the list one node at a time.

Try to modify the *inventory.c* program of Laboratory 6 by adding two new operations.

Reference: K. N. King "C Programming: A Modern Approach", Norton Publishing, 2nd Edition, 2008.