

Lab no 12: Program to solve simple file handling problems.

Create a structure called book having a member name, price, author and pages. Create a file called "Library.dat" and store 5 books. Now, print the book name and the price of the book which is above 300.

```
#include <stdio.h>

struct book {
    char name[30];
    char author[30];
    int pages;
    float price;
};

int main() {
    int i;

    // Create a structure array for 500 books
    struct book it[500];

    FILE *fp;
    fp = fopen("Library.dat", "w");
    if (fp == NULL) {
        printf("Error opening file!\n");
        return 1; // Exit the program if file opening fails
    }

    // Input data for 500 books and write to the file
    for (i = 0; i < 5; i++) {
        printf("Enter the Book name, author name, pages and price for book[%d]: ", i + 1);
        scanf("%s%s%d%f", it[i].name, it[i].author, &it[i].pages, &it[i].price);
        fprintf(fp, "%s %s %d %.2f\n", it[i].name, it[i].author, it[i].pages, it[i].price);
    }
    fclose(fp);

    // Open the file for reading
    fp = fopen("Library.dat", "r");
    if (fp == NULL) {
        printf("Error opening file!\n");
        return 1; // Exit the program if file opening fails
    }

    printf("The Book name with price more than 300 are given below: \n");
    printf("Bookname\tPrice\n");

    // Read data from the file and print the books with price above 300
    for (i = 0; i < 5; i++) {
        fscanf(fp, "%s %s %d %f", it[i].name, it[i].author, &it[i].pages, &it[i].price);
        if (it[i].price > 300) {
            printf("%s\t%.2f\n", it[i].name, it[i].price);
        }
    }
    fclose(fp);

    return 0;
}
```

Output:

```
Enter the Book name, author name, pages and price for book[1]: Hamlet Shakespreare 1234 888
Enter the Book name, author name, pages and price for book[2]: Adventure Harold 3287 999
Enter the Book name, author name, pages and price for book[3]: Suspense JK 6654 765
Enter the Book name, author name, pages and price for book[4]: Manga Elichiro 5000 799
Enter the Book name, author name, pages and price for book[5]: Mystery Jiro 2650 1999
The Book name with price more than 300 are given below:
Bookname      Price
Hamlet        888.00
Adventure     999.00
Suspense      765.00
Manga         799.00
Mystery       1999.00
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Process exited with return value 0
Press any key to continue . . . █
```