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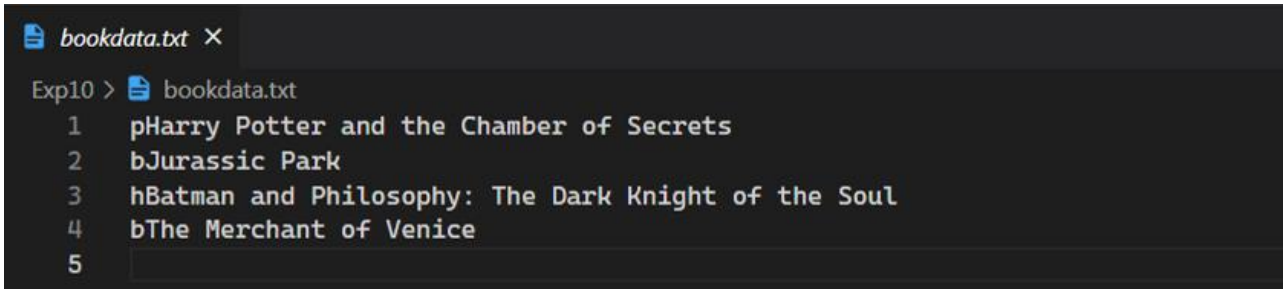
Experiment No.	10

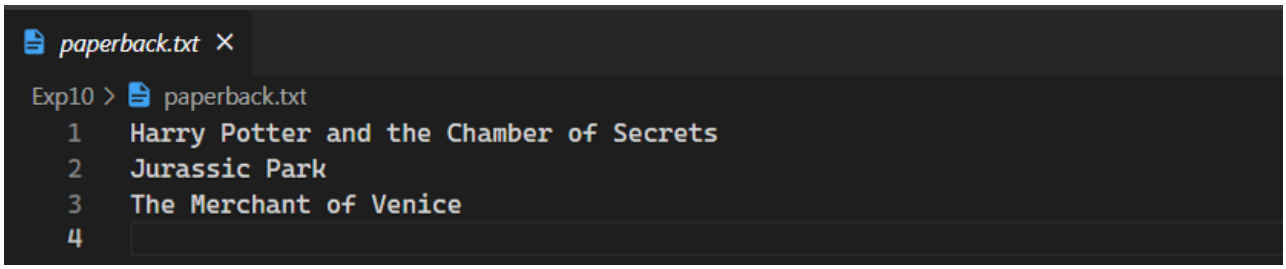
AIM:	**Implement various operations on files to solve a given problem.**
Program 1	
PROBLEM STATEMENT :	A publishing company holds in a file detail of all the books they publish. However, in the future, they wish to maintain two distinct files (i) paperbacks (ii) hardbacks. Write a program which reads a file containing details of both paperback and hardback books and creates two files as specified above. Assume that the first character in each input record indicates if the book is paperback(p) or hardback(h) or both(b).
Pseudo Code:	Step 1: START BookPublish.c Step 2: Initialize character array(bookname) of length 100 Step 3: Set input = fopen("bookdata.txt", "r") Step 4: Set paper = fopen("paperback.txt", "w") Step 5: Set hard = fopen("hardback.txt", "w") Step 6: Check if input is equal to NULL, If yes, Print "Book Data Not Found! Exiting Program" and END Step 7: While (fscanf(input, "%c%[^\n]%*c", &format, bookname) is not equal to EOF), Repeat steps 8 to 12. Step 8: Check if format is equal to 'b', If yes, Perform steps 9 to 10. Else, Perform step 11. Step 9: Call fprintf(paper, "%s\n", bookname) Step 10: Call fprintf(hard, "%s\n", bookname) Step 11: Check if format is equal to 'p', If yes, Call fprintf(paper, "%s\n", bookname) Else, Perform step 12. Step 12: Check if format is equal to 'h' If yes, Call fprintf(hard, "%s\n", bookname) Step 13: Call fclose(input) Step 14: Call fclose(paper) Step 15: Call fclose(hard)

	Step 16: END

PROGRAM:	`#include<stdio.h>`
	
	`int main()`
	`{`
	` FILE *input, *paper, *hard;`
	` char format, bookname[100];`
	` // Open required files in proper format`
	` input = fopen("bookdata.txt", "r");`
	` paper = fopen("paperback.txt", "w");`
	` hard = fopen("hardback.txt", "w");`
	` if (input == NULL)`
	` {`
	`  printf("Book Data Not Found! Exiting Program");`
	`  return 0;`
	` }`
	` // Get book names`
	` while (fscanf(input, "%c%[^\n]%*c", &format, bookname) != EOF)`
	` {`
	` // Sort books according to the format`
	`  if (format == 'b')`
	`  {`
	`  fprintf(paper, "%s\n", bookname);`
	`  fprintf(hard, "%s\n", bookname);`
	`  }`
	`  else if (format == 'p')`
	`  {`
	`  fprintf(paper, "%s\n", bookname);`
	`  }`
	`  else if (format == 'h')`
	`  {`
	`  fprintf(hard, "%s\n", bookname);`
	`  }`
	` }`
	` // Close all files`
	` fclose(input);`
	` fclose(paper);`
	` fclose(hard);`
	` return 0;`
	`}`

RESULT:





Program 2	
PROBLEM STATEMENT :	Set up a file containing vehicle Records which hold registration number and owner information (name and address). Write a program which, given a vehicle's registration number, will rapidly retrieve and print the owner information.
Pseudo Code:	Step 1: START VehicleRecord.c Step 2: Initialize character array(owner_data) of length 100 Step 3: Set flag := 0 Step 4: Set data = fopen("VehicleData.txt", "w") Step 5: Read Number of vehicles(n) from user. Step 6: For every number(i) between 0 and n, Repeat steps 7 to 9. Step 7: Read Vehicle registration number(vno) from user. Step 8: Read a string(owner_data) from user. Step 9: Call fprintf(data, "%d %s\n", vehicle_no, owner_data) Step 10: Call fclose(data) Step 11: Set data = fopen("VehicleData.txt", "r"); Step 12: Read Vehicle number to be searched(search) from user.

	Step 13: While (fscanf(data, "%d %[^\n]%*c", &vehicle_no, owner_data) is not equal to EOF), Repeat steps 14 to 17. Step 14: Check if search is equal to vehicle_no If yes, Perform steps 15 to 17. Step 15: Print "Owner Details: owner_data" Step 16: Set flag := 1 Step 17: Break Step 18: Check if flag is not equal to 1, If yes, Print "Vehicle Registration Number Not Found" Step 19: Call fclose(data) Step 20: END

PROGRAM:	`#include <stdio.h>`
	
	`int main()`
	`{`
	`FILE *data;`
	`char owner_data[100];`
	`int n, vehicle_no, search, flag = 0;`
	`// Get Vehicle details`
	`data = fopen("VehicleData.txt", "w");`
	`printf("Enter How many Vehicles you want: ");`
	`scanf("%d", &n);`
	`for (int i = 0; i < n; i++)`
	`{`
	`printf("\nEnter Vehicle %d Registration Number: ", i + 1);`
	`scanf("%*c%d", &vehicle_no);`
	`printf("\nEnter Owner %d data: ", i + 1);`
	`scanf("%*c%[^\n]", &owner_data);`
	`fprintf(data, "%d %s\n", vehicle_no, owner_data);`
	`}`
	`fclose(data);`
	`data = fopen("VehicleData.txt", "r");`
	`printf("\n\nEnter Vehicle Registration Number to be searched: ");`
	`scanf("%d", &search);`
	`// Search in Record file`
	`while (fscanf(data, "%d %[^\n]%*c", &vehicle_no, owner_data) != EOF)`
	`{`
	`if (search == vehicle_no)`

```
        {
            printf("\nOwner Details: %s\n", owner_data);
            flag = 1;
            break;
        }
    }
    if (flag != 1)
    {
        printf("\nVehicle Registration Number Not Found\n");
    }
    fclose(data);
    return 0;
}
```

RESULT:

```
PS D:\C Programming\Exp10> .\VehicleRecord.exe
Enter How many Vehicles you want: 3

Enter Vehicle 1 Registration Number: 11111

Enter Owner 1 data: Dhanush Mehra Malad(E)

Enter Vehicle 2 Registration Number: 22222

Enter Owner 2 data: Manish Tella Andheri(W)

Enter Vehicle 3 Registration Number: 33333

Enter Owner 3 data: Adit Singh Chembur


Enter Vehicle Registration Number to be searched: 22222

Owner Details: Manish Tella Andheri(W)
```

VehicleData.txt

Exp10 > VehicleData.txt

```
1  11111 Dhanush Mehra Malad(E)
2  22222 Manish Tella Andheri(W)
3  33333 Adit Singh Chembur
4
```