LIBRARY MANAGEMENT

AIM:

To create a Library Management System of books using Structure program by getting details of five book list.

PROCEDURE:

· stdio.h is included to perform input and output operations.

· A macro SIZE is defined to store the number of books.

· A structure is defined to store book name, book ID, and book price.

· Function prototypes are declared for uploading book details and displaying book details.

· An array of structures is created to store details of multiple books.

· UploadBook() is called to read and store details of five books.

· The user is asked to enter a book ID for searching.

· The entered book ID is passed to the Details() function.

· Details() searches the book ID in the structure array.

· When the ID matches, the corresponding book details are displayed.

· The program completes after printing the book information.

PROGRAM:

```c
/*
 * Library Management System
 * using functions and structures.
 * Author   : MUTHUGANESH S
 * Date     : 16/01/2026
 * Filename : LibraryManagement.c
 * retval   : void
 */

#include <stdio.h>
#define SIZE 5

// Structure Declaration
struct LibraryManagement
{
    int Price;
    int BookID;
    char BookName[20];
};
```

```c
// Function Prototype
void UploadBook(struct  LibraryManagement Library[]);
void Details(struct  LibraryManagement Library[],int ID);

int main(void){

    struct LibraryManagement Library[SIZE];// Array of Structures

    // Function Call for Uploading Book Details
    UploadBook(Library);

    int ID;
    printf("\nEnter Book ID for Book Details: ");
    scanf("%d",&ID);

    // Function Call for Book Details by Book ID
    Details(Library,ID);

    return 0;
}

void UploadBook(struct LibraryManagement Library[]){

    printf("Enter 5 Books Details : \n");

    for(int i=0;i<SIZE;i++){

        printf("\nEnter %d.Book Name : ", i+1);
        scanf("%s",Library[i].BookName);

        printf("Enter Book ID : ");
        scanf("%d",&Library[i].BookID);

        printf("Enter Book Price : ");
        scanf("%d",&Library[i].Price);
    }
}

// Function Definition for Book Details by Book ID
void Details(struct  LibraryManagement Library[],int ID){

    for(int i=0;i<SIZE;i++){
        if(Library[i].BookID == ID){

            printf("Book Name : %s\n",Library[i].BookName);
            printf("Book ID   : %d\n",Library[i].BookID);
            printf("Book Price: %d\n",Library[i].Price);
        }
    }

}
```

OUTPUT:

```
Microsoft Windows [Version 10.0.26200.6899]
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M:\training\FUNCTION\STRUCTURE>gcc LibraryManagement.c -o LibraryManagem

M:\training\FUNCTION\STRUCTURE>LibraryManagement
Enter 5 Books Details :

Enter 1.Book Name : Harry
Enter Book ID : 7012
Enter Book Price : 700

Enter 2.Book Name : Gooms
Enter Book ID : 7019
Enter Book Price : 900

Enter 3.Book Name : MGsquad
Enter Book ID : 8011
Enter Book Price : 1000

Enter 4.Book Name : Alice
Enter Book ID : 7878
Enter Book Price : 200

Enter 5.Book Name : SV
Enter Book ID : 3432
Enter Book Price : 100

Enter Book ID for Book Details: 8011
Book Name : MGsquad
Book ID   : 8011
Book Price: 1000

M:\training\FUNCTION\STRUCTURE>
```