```
/* #Project Library */
#include<stdio.h>
#include<stdlib.h>
#include<string.h>
struct book
{
   int no;
        char title[20];
        char author[20];
        float price;
        int copies;
};
int main()
{
        int i,n,option,num=1;
   struct book b[10];

   while(num!=0)
   {
      printf("\n 1.Reading book details");
      printf("\n 2.Print book details");
      printf("\n 3.List of  all  avalible books");
      printf("\n 4.Search a book based on number");
      printf("\n 5.Search a book based on title");
```

```
    printf("\n 6.Number of avalible  book copies");
    printf("\n 7.Insert a book at given position");
    printf("\n 8.Update a book");
    printf("\n 9.Delete a book");
    printf("\n 10.Exit\n");
  printf("Enter your option:");
  scanf("%d",&option);

if(option==1)
{
  printf("How many books details do you want to enter:");
  scanf("%d",&n);
  read(b,n); //reading book
}
else if(option==2)
   print(b,n); //printing function

else if(option==3)
   available(b,n); //available books

else if(option==4)
   based_on_number(b,n); //number wise books

else if(option==5)
```

```
      based_on_title(b,n); //search based on title


   else if(option==6)
      copies(b,n); //avalible no of copies


   else if(option==7)
    n=insert_by_pos(b,n);  //insert at new position


   else if(option==8)
      update_book(b,n);    //update a books


   else if(option==9)      // delete a book
      n=delete_book(b,n);




     printf("\n Enter '1' to continue: \n Enter '0' to exit:\n Enter your
choice:");
     scanf("%d",&num);


 }
}
```

```
read(struct book b[ ],int n)     //reading function
{
        printf("\n------Reading books details------\n");
        int i;

   for(i=0;i<n;i++)
   {

           printf("\nEnter Book %d details\n\n",i+1);
           printf("Enter book no:");
                scanf("%d",&b[i].no);
           printf("Enter title:");
           scanf("%s",b[i].title);
           printf("Enter Author name:");
           scanf("%s",b[i].author);
           printf("Enter price:");
           scanf("%f",&b[i].price);
           printf("Enter copies of a book:");
           scanf("%d",&b[i].copies);
        }
}

print(struct book b[ ],int n)         //printing function
{
```

```
        int i;
        printf("\n------Books Details------\n");
        for(i=0;i<n;i++)
        {
                printf("\nBook %d details:\n",i+1);
           printf("\nBook no :%d",b[i].no);
           printf("\nTitle   :%s",b[i].title);
           printf("\nAuthor  :%s",b[i].author);
       printf("\nPrice   :%f\n",b[i].price);
       printf("\n Copies :%d\n",b[i].copies);
        }
}

available(struct book b[ ],int n)         //available books
{
        printf("\n------Available Books Details------\n");
        print(b,n);



}
based_on_number(struct book b[ ],int n)         //searching a book
based on title
{
        int num;
```

```
        int i,j;
        printf("\n---Searching a book by its title---\n");
        printf("\nEnter book number:");
        scanf("%d",&num);
        printf("\n------Your searched book Details------\n");
        for(i=0;i<n;i++)
        {
           if(b[i].no==num)
           {
                  printf("\nBook %d details:\n",i+1);
              printf("\nBook no :%d",b[i].no);
              printf("\nTitle   :%s",b[i].title);
              printf("\nAuthor  :%s",b[i].author);
         printf("\nPrice   :%f\n",b[i].price);
               }
   }
}

based_on_title(struct book b[ ],int n)        //searching a book based
on title
{
        char title[20];
        int i,j;
        printf("\n---Searching a book by its title---\n");
```

```
        printf("\nEnter book title:");
        scanf("%s",title);
        printf("\n------Your searched book Details------\n");
        for(i=0;i<n;i++)
        {
           if(strcmp(b[i].title,title)==0)
           {
                  printf("\nBook %d details:\n",i+1);
              printf("\nBook no :%d",b[i].no);
              printf("\nTitle   :%s",b[i].title);
              printf("\nAuthor  :%s",b[i].author);
          printf("\nPrice   :%f\n",b[i].price);
                }
    }
}

update_book(struct book b[ ],int n)         //update a book
{
        int i,p;
        printf("\n------Book updation------\n");
        printf("\nEnter a book number to update:");
        scanf("%d",&p);  //u=updating book number

    printf("\n-------Enter new book details------\n");
```

```
        printf("\nEnter book no:");
        scanf("%d",&b[p-1].no);
        printf("Enter title:");
        scanf("%s",&b[p-1].title);
        printf("Enter Author name:");
        scanf("%s",&b[p-1].author);
    printf("Enter price:");
    scanf("%f",&b[p-1].price);

        printf("\n------Books Details after updation------\n");
        for(i=0;i<n;i++)
        {
                printf("\nBook %d details:\n",i+1);
            printf("\nBook no :%d",b[i].no);
            printf("\nTitle   :%s",b[i].title);
            printf("\nAuthor  :%s",b[i].author);
       printf("\nPrice   :%f\n",b[i].price);
        }
}



copies(struct book b[ ],int n)          //available no.of copies for a book
```

```
{
   int i,j,c[20],size;

   for(i=0;i<n;i++)
   {
      printf("\nEnter available copies for this book:'%s':",b[i].title);
      scanf("%d",&c[i]);
   }


   printf("\n------No.of copies available for a book title------\n");
   for(i=0;i<n;i++)
   {
      printf("\nAvailable copies for this book:'%s'' is %d",b[i].title,c[i]);
   }
}

 insert_by_pos(struct book b[ ],int n)         //inserting at specified
position
{
   int i,j,pos;
   printf("\nEnter position to insert a book details:");
   scanf("%d",&pos);
```

```
for(i=n;i>=pos-1;i--)
{
   b[i+1].no=b[i].no;
   strcpy(b[i+1].title,b[i].title);
   strcpy(b[i+1].author,b[i].author);
   b[i+1].price=b[i].price;
   b[i+1].copies=b[i].copies;



}
printf("Enter book no:");
scanf("%d",&b[pos-1].no);
printf("Enter title:");
   scanf("%s",b[pos-1].title);
   printf("Enter Author name:");
   scanf("%s",b[pos-1].author);
   printf("Enter price:");
   scanf("%f",&b[pos-1].price);
   printf("Enter copies:");
   scanf("%d",&b[pos-1].copies);
```

```
   printf("\n------Books Details after inserting at specified position-----
-\n");
   for(i=0;i<=n;i++)
   {
      printf("\nBook %d details:\n",i+1);
      printf("\nBook no :%d",b[i].no);
      printf("\nTitle   :%s",b[i].title);
      printf("\nAuthor  :%s",b[i].author);
      printf("\nPrice   :%f\n",b[i].price);
      printf("\nPrice   :%d\n",b[i].copies);

   }
   return n+1;
}

 delete_book(struct book b[ ],int n)         //deleting a book
{
   int i,j,pos;
   printf("\n------Deleting a book------\n");

   printf("\nEnter book position to delete:");
   scanf("%d",&pos);   //d=deleting position
   if(pos>=n+1)
   {
```

```
   printf("\nInvalid position:deletion not possible\n");
}
else
{

for(i=pos-1;i<n-1;i++)
{

   b[i].no   =  b[i+1].no;
   strcpy(b[i].title,b[i+1].title);
   strcpy(b[i].author,b[i+1].author);
   b[i].price = b[i+1].price;
   b[i].copies = b[i+1].copies;
}
}
printf("\n-------Books details after deletion-------\n");
for(i=0;i<n-1;i++)
{
   printf("\nBook %d details:\n",i+1);
   printf("\nBook no :%d",b[i].no);
   printf("\nTitle   :%s",b[i].title);
   printf("\nAuthor  :%s",b[i].author);
   printf("\nPrice   :%f\n",b[i].price);
   printf("\ncopies   :%d\n",b[i].copies);
```

```
    }
    return n-1;
}
```