Function Declaration

1.void insertData()

```
void insertData()

{

char next='y';

int duplicatebookno=0,lastbookno;;


while(next=='y'||next=='Y')

{

aa:


printf("\nEnter the book no ");

scanf("%d",&b.bn);

//code to call function to check the book no. has been repeated or not

duplicatebookno=checkBookNo(b.bn);

if(duplicatebookno==1)

{

printf("\n\nThe book no. which you typed just now, is already exists in the data file!!!!!");

printf("\n\nPlease, enter the unique book no.!!!");
```

```c
lastbookno=findLastBookNo();

printf("\n\nThe last book no. is : %d",lastbookno);

getch();

goto aa;

}

fflush(stdin);

printf("\nEnter the title of the book ");

gets(b.title);

printf("\nEnter the subject of the book ");

gets(b.sub);

printf("Enter the price of the book ");

scanf("%f",&b.price);

printf("\nEnter the no. of book ");

scanf("%d",&b.nob);

fflush(stdin);

printf("\nEnter the author of the book ");

gets(b.author);

printf("\nEnter the publisher of the book ");

gets(b.publisher);

fp=fopen("Book.dat","a");

if(fp==NULL)

{
```

```c
printf("\nFile creation error has occurred!!!");
}
else
{
fwrite(&b,sizeof(b),1,fp);
fclose(fp);

printf("\n\nDo you want to insert record of another book (Y/N)? ");
next=getche();
}
}


}
```

2.void displayData(void)

```c
void displayData(void)
{

fp=fopen("Book.dat","r");
rewind(fp);
if(fp==NULL)
{
printf("\n\nRead operation failure as the file file which you are searching does not exist!!!");
}
```

```c
else
{
printf("\n\tBook No.\tTitle\Subject\tPrice\tNo. of Books\tAuthor\tPublisher");
while(fread(&b,sizeof(b),1,fp)==1)
{
printf("\n\t%-8d\t%s\t%s\tRs. %.2f\t%d\t%s\t%s",b.bn,b.title,b.sub,b.price,b.nob,b.author,b.publisher);
}
fclose(fp);
}
getch();
}
```

3.void updateData(int)

```c
void updateData(int bn)
{
fp=fopen("Book.dat","r");
fp1=fopen("newBook.dat","w");
if(fp==NULL || fp1==NULL)
{
printf("\nFile Operation failed");
}
```

```c
else
{
//code to show the existing data
printf("\n\nThe followings are the existing data!!!!!!");
while(fread(&b,sizeof(b),1,fp)==1)
{
if(b.bn==bn)
{
printf("\n\tBook No. : %d",b.bn);
printf("\n\tTitle : %s",b.title);
printf("\n\tSubject : %s",b.sub);
printf("\n\tPrice : Rs. %.2f",b.price);
printf("\n\tNo. of Books : %d",b.nob);
printf("\n\tAuthor : %s",b.author);
printf("\n\tPublisher : %s",b.publisher);
}
}
//code to enter new data
rewind(fp);
printf("\n\nEnter the new correct data ");
while(fread(&b,sizeof(b),1,fp)==1)
{
if(bn==b.bn)
{
```

```c
printf("\n\n\nEnter the book no ");
scanf("%d",&b.bn);
fflush(stdin);
printf("\nEnter the title of the book ");
gets(b.title);
printf("\nEnter the subject of the book ");
gets(b.sub);
printf("Enter the price of the book ");
scanf("%f",&b.price);
printf("\nEnter the no. of book ");
scanf("%d",&b.nob);
fflush(stdin);
printf("\nEnter the author of the book ");
gets(b.author);
printf("\nEnter the publisher of the book ");
gets(b.publisher);
fwrite(&b,sizeof(b),1,fp1);
}
else
{
fwrite(&b,sizeof(b),1,fp1);
}
}
fclose(fp);
```

```
fclose(fp1);

remove("Book.dat");

rename("newBook.dat","Book.dat");

printf("\n\nThe record has been successfully updated in the data
file");

}

getch();

}
```

4.void deleteData(int)

```
void deleteData(int bn)

{

fp=fopen("Book.dat","r");

fp1=fopen("newBook.dat","w");

if(fp==NULL || fp1==NULL)

{

printf("\nFile Operation failed");

}

else

{

while(fread(&b,sizeof(b),1,fp)==1)

{

if(bn==b.bn)

{

continue;
```

```c
}
else
{
fwrite(&b,sizeof(b),1,fp1);
}
}
fclose(fp);
fclose(fp1);
remove("Book.dat");
rename("newBook.dat","Book.dat");
printf("\n\nThe record has been successfully deleted from the data
file");
}
getch();
}
```

5.void searchData(void)

```c
void searchData(void)
{
int bn,found=0;
char bname[100],subject[100];
int ch;

printf("\n\t\t***********************************");
printf("\n\t\t*******Search Menu*******************");
```

```c
printf("\n\t\t***********************************");
printf("\n\t\t1. Search by Book No. ");
printf("\n\t\t2. Search by Book Title ");
printf("\n\t\t3. Search by Book Subject ");
printf("\n\t\t4. Quit Search");
printf("\n\nEnter your choice for search ");
scanf("%d",&ch);
switch(ch)
{
case 1:
//search on the basis of book no.

fp=fopen("Book.dat","r");
printf("\n\nEnter the book no. which you want to search ");
scanf("%d",&bn);
if(fp==NULL)
{
printf("\nFile search operation failed!!!!!!!!!!!!!!!!");
}
else
{
while(fread(&b,sizeof(b),1,fp)==1)
{
if(b.bn==bn)
```

```c
{
printf("\n\tBook No. : %d",b.bn);

printf("\n\tTitle : %s",b.title);

printf("\n\tSubject : %s",b.sub);

printf("\n\tPrice : Rs. %.2f",b.price);

printf("\n\tNo. of Books : %d",b.nob);

printf("\n\tAuthor : %s",b.author);

printf("\n\tPublisher : %s",b.publisher);

found=1;

}

}

if(found==0)

{

printf("\n!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!");

printf("\nThe book which you are searching is not found ");

}

fclose(fp);

}

break;

case 2:

//searh on the basis of book title


fflush(stdin);

printf("\n\nEnter the title of the book which you want to search ");
```

```c
gets(bname);
fp=fopen("Book.dat","r");
if(fp==NULL)
{
printf("\nFile search operation failed!!!!!!!!!!!!!!!!!");
}
else
{
while(fread(&b,sizeof(b),1,fp)==1)
{
if(strcmpi(b.title,bname)==0)
{
printf("\n\tBook No. : %d",b.bn);
printf("\n\tTitle : %s",b.title);
printf("\n\tSubject : %s",b.sub);
printf("\n\tPrice : Rs.%.2f",b.price);
printf("\n\tNo. of Books : %d",b.nob);
printf("\n\tAuthor : %s",b.author);
printf("\n\tPublisher : %s",b.publisher);
found=1;
}
}
if(found==0)
{
```

```c
printf("\n!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!");
printf("\nThe book which you are searching is not found ");
}
fclose(fp);
}
break;
case 3:
//search on the basis of subject

fflush(stdin);
printf("\n\nEnter the subject of the book which you want to search ");
gets(subject);
fp=fopen("Book.dat","r");
if(fp==NULL)
{
printf("\nFile search operation failed!!!!!!!!!!!!!!!!!");
}
else
{
while(fread(&b,sizeof(b),1,fp)==1)
{
if(strcmpi(b.sub,subject)==0)
{
```

```c
printf("\n\tBook No. : %d",b.bn);

printf("\n\tTitle : %s",b.title);

printf("\n\tSubject : %s",b.sub);

printf("\n\tPrice : Rs.%.2f",b.price);

printf("\n\tNo. of Books : %d",b.nob);

printf("\n\tAuthor : %s",b.author);

printf("\n\tPublisher : %s",b.publisher);

found=1;

}

}

if(found==0)

{

printf("\n!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!");

printf("\nThe book which you are searching is not found ");

}

fclose(fp);

}

break;

case 4:

//code to close search window

printf("\nPress any key to quit the search operation");

break;

default:

printf("\nYou entered invalid choice for search ");
```

```c
}
getch();
}
```

6.int checkBookNo(int)

```c
int checkBookNo(int bn)
{
int repeated=0,lastbookno;
struct book b1;
fp=fopen("Book.dat","r");
if(fp==NULL)
{
printf("\n\nRead operation failure as the file file which you are searching does not exist!!!");
}
else
{
while(fread(&b1,sizeof(b1),1,fp)==1)
{
if(b1.bn==bn)
{
repeated=1;
break;
}
```

```c
}

fclose(fp);

}

return(repeated);

}
```

7.int findLastBookNo(void)

```c
int findLastBookNo()

{

int lastbookno;

struct book b2;

fp=fopen("Book.dat","r");

if(fp==NULL)

{

printf("\n\nFile open operation failure!!!");

}

else

{

while(fread(&b2,sizeof(b2),1,fp)==1)

{

lastbookno=b2.bn;

}

fclose(fp);

}
```

```
return(lastbookno);
}
```