➢Library Management system in C

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```c
1   #include <stdio.h>
2   #include <stdlib.h>
3   #include<string.h>
4   #include<conio.h>
5   #include<windows.h>
6   #include<string.h>
7   #include<ctype.h>
8   #include<dos.h>
9   #include<time.h>
10
11  void islogin(){
12      printf("\t\t\t############################################################\n");
13      printf("\t\t\t**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-*");
14      printf("\n\t\t\t=========                                     =========");
15      printf("\n\t\t\t<><><><><>   Online Library Management System Project   <><><><><>");
16      printf("\n\t\t\t=========                                     =========");
17      printf("\n\t\t\t**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-**-*");
18      printf("\n\t\t\t------------------------------------------------------------");
19      printf("\n\t\t\t------------------------------------------------------------\n\n");
20      // system("pause");
21      printf("\n\t\t\t\t----------------------------\n\t\t\t\t|   <<>>   Login   <<>>  |\n\t\t\t\t----------------------------");
22      char name='a';
23      char names;
24      int id1=515;
25      int id2;
26      printf("\nEnter password :");        // -->(515)
27      scanf("%d",&id2);
28      while(id1!=id2){
29      printf("Wrong password.Please again ::");
30      scanf("%d",&id2);
31                  }
32      printf("\nEnter user_name :");      //-->user name==a
33      scanf("%s",&names);
34      if(name==names){
35      printf("Congratulations");
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36                        }
37       else{
38          printf("Wrong user_name.Please again ::");
39          scanf("%s",&names);
40       }
41       //system("cls");                                    //
42       printf("\n\n\n\n\n");
43       printf("\n\t\t\t    **-**-**-**-**-**-**-**-**-**-**-**-**-**-**-*-*");
44       printf("\n\t\t\t    |-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=| ");
45       printf("\n\t\t\t    | =   =                WELCOME              = =  | ");
46       printf("\n\t\t\t    |  =   =                 TO                  = =  | ");
47       printf("\n\t\t\t    |   = =              LIBRARY               = = | ");
48       printf("\n\t\t\t    |  =   =            MANAGEMENT              = =  | ");
49       printf("\n\t\t\t    | =   =              SYSTEM                = =   | ");
50       printf("\n\t\t\t    |-=-=-==-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-| ");
51       printf("\n\t\t\t    **-**-**-**-**-**-**-**-**-**-**-**-**-**-**-*-*\n");
52
53    }
54    struct student
55    {
56       int bookid;
57       char title[30];
58       char authobook[30];
59       float costofbook;
60    }stud;
61
62    void insert()
63    {
64       FILE *fp;
65       fp = fopen("Record", "a");
66       printf("Enter the Book ID   :");
67       scanf("%d", &stud.bookid);
68       printf("Enter the Book Name    :");
```

```
68        printf("Enter the Book Name    :");
69        scanf("%s", &stud.title);
70        printf("Enter the Authority Name    :");
71        scanf("%s", &stud.authobook);
72        printf("Enter the Cost of Book    :");
73        scanf("%f", &stud.costofbook);
74        fwrite(&stud, sizeof(stud), 1, fp);
75        fclose(fp);
76    }
77    void disp()
78    {
79        FILE *fp1;
80        fp1 = fopen("Record", "r");
81        printf("\nBook ID\tBook Name\tAuthority Name\tCost of Book\n\n");
82        while (fread(&stud, sizeof(stud), 1, fp1))
83        printf("  %d\t\t%s\t%s\t%.2f\n", stud.bookid, stud.title,stud.authobook, stud.costofbook);
84        fclose(fp1);
85    }
86    void search()
87    {
88        FILE *fp2;
89        int r, s, avl;
90        printf("\nEnter the Book ID you want to search  :");
91        scanf("%d", &r);
92        avl = avlrollno(r);
93        if (avl == 0)
94         printf(">>Book ID %d is not available in the file\n",r);
95        else
96        {
97         fp2 = fopen("Record", "r");
98         while (fread(&stud, sizeof(stud), 1, fp2))
99         {
100          s = stud.bookid;
101          if (s == r)
```

```c
102          {
103            printf("\n>>Book ID = %d", stud.bookid);
104            printf("\n>>Book Name    = %s", stud.title);
105            printf("\n>>Authority Name    = %s", stud.authobook);
106            printf("\n>>Cost of Book    = %.2f\n", stud.costofbook);
107          }
108        }
109        fclose(fp2);
110      }
111    }
112    void deletefile()
113    {
114      FILE *fpo;
115      FILE *fpt;
116      int r, s;
117      printf("Enter the Book ID you want to delete :");
118      scanf("%d", &r);
119      if (avlrollno(r) == 0)
120        printf(">>Book ID %d is not available in the file\n", r);
121      else
122      {
123        fpo = fopen("Record", "r");
124        fpt = fopen("TempFile", "w");
125        while (fread(&stud, sizeof(stud), 1, fpo))
126        {
127          s = stud.bookid;
128          if (s != r)
129            fwrite(&stud, sizeof(stud), 1, fpt);
130        }
131        fclose(fpo);
132        fclose(fpt);
133        fpo = fopen("Record", "w");
134        fpt = fopen("TempFile", "r");

135        while (fread(&stud, sizeof(stud), 1, fpt))
136          fwrite(&stud, sizeof(stud), 1, fpo);
137        printf("\n>>RECORD DELETED\n");
138        fclose(fpo);
139        fclose(fpt);
140      }

141

142    }
143    void update()
144    {
145      int avl;
146      FILE *fpt;
147      FILE *fpo;
148      int s, r, ch;
149      printf("Enter Book ID to update:");
150      scanf("%d", &r);
151      avl = avlrollno(r);
152      if (avl == 0)
153      {
154        printf("Book ID %d is not Available in the file", r);
155      }
156      else
157      {
158        fpo = fopen("Record", "r");
159        fpt = fopen("TempFile", "w");
160        while (fread(&stud, sizeof(stud), 1, fpo))
161        {
162          s = stud.bookid;
163          if (s != r)
164            fwrite(&stud, sizeof(stud), 1, fpt);
165          else
166          {
167            printf("\n\t1. Update Book Name of Roll Number %d", r);
```

```c
168          printf("\n\t2. Update ID of book  %d", r);
169          printf("\n\t3. Update both Name and ID of book  %d", r);
170          printf("\nEnter your choice:");
171          scanf("%d", &ch);
172          switch (ch)
173          {
174          case 1:
175           printf("Enter Book Name:");
176           scanf("%s", &stud.title);
177           break;
178          case 2:
179           printf("Enter Book ID : ");
180           scanf("%f", &stud.costofbook);
181           break;
182          case 3:
183           printf("Enter Book Name: ");
184           scanf("%s", &stud.title);
185           printf("Enter Book ID: ");
186           scanf("%f", &stud.costofbook);
187           break;
188          default:
189           printf("Invalid Selection");
190           break;
191          }
192          fwrite(&stud, sizeof(stud), 1, fpt);
193         }
194        }
195       fclose(fpo);
196       fclose(fpt);
197       fpo = fopen("Record", "w");
198       fpt = fopen("TempFile", "r");
199       while (fread(&stud, sizeof(stud), 1, fpt))
200       {
201          fwrite(&stud, sizeof(stud), 1, fpo);
202       }
203        fclose(fpo);
204        fclose(fpt);
205        printf(">>RECORD UPDATED");
206       }
207      }
208
209      void sort()
210      {
211       int a[20], count = 0, i, j, t, c;
212       FILE *fpo;
213       fpo = fopen("Record", "r");
214       while (fread(&stud, sizeof(stud), 1, fpo))
215       {
216        a[count] = stud.bookid;
217        count++;
218       }
219       c = count;
220       for (i = 0; i<count - 1; i++)
221       {
222        for (j = i + 1; j<count; j++)
223        {
224         if (a[i]>a[j])
225          {
226           t = a[i];
227           a[i] = a[j];
228           a[j] = t;
229          }
230        }
231       }
232       printf("Book ID.\tBook Name\t\tID\n\n");
233       count = c;
```

```c
    for (i = 0; i<count; i++)
    {
      rewind(fpo);
      while (fread(&stud, sizeof(stud), 1, fpo))
      {
        if (a[i] == stud.bookid)
          printf("\n %d\t\t %s \t\t %2f",stud.bookid, stud.title, stud.costofbook);
      }

    }
  }

  int avlrollno(int rno)
  {
    FILE *fp;
    int c = 0;
    fp = fopen("Record", "r");
    while (!feof(fp))
    {
      fread(&stud, sizeof(stud), 1, fp);

      if (rno == stud.bookid)
      {
        fclose(fp);
        return 1;
      }
    }
    fclose(fp);
    return 0;
  }

  int empty()
  {
```

```c
int empty()
{
  int c = 0;
  FILE *fp;
  fp = fopen("Record", "r");
  while (!fread(&stud, sizeof(stud), 1, fp))
    c = 1;
  fclose(fp);
  return c;
}

void menu()
{
    int x;
    printf("\n\t\t----------------\n\t\tFOLDER BOOK MENU\n\t\t----------------\n\t\t1.Education.\n\t\t2.Fiction.\n\t\t3.Comic.\n\t\t4.History\n\t\t5.Exit\n\t\tEnter choice :");
    scanf("%d",&x);
    if(x==1){
    printf("\n------------\n1.Science\n2.Commerce\n3.Arts\n------------\nSelect any category :");
    int y;
    scanf("%d",&y);
    if(y==1){
    printf("------------------------\n\n\nBookshelf Level-> A1\nName of the Books are:\n1.Physics.\n2.Chemistry.\n3.Math.\n4.Biology.\n===============\n");
    printf("------------------------\nBookshelf Level-> A2\nName of the Books are:\n1.Physics 1st & 2nd paper.\n2.Chemistry 1st & 2nd paper.\n 3.Math 1st & 2nd.\n4.Biology 1st & 2nd.\n===============\n");
    }
    if(y==2){
    printf("------------------------\nBookshelf Level-> B1\nName of the Books are:\n1.Accounting .\n2.Business organization and Management..\n3.Production Management and Marketing.\n========\n");
    printf("------------------------\n");
    printf("\nBookshelf Level-> B2\n");
    printf("\nName of the Books are:");
    printf("1.Accounting 1st & 2nd paper.\n");
    printf("2.Business organization and Management 1st & 2nd paper.\n");
    printf("3.Production Management and Marketing 1st & 2nd paper.\n");
    printf("------------------------");
    }
    if(y==3){
    printf("------------------------\nBookshelf Level-> C1\nName of the Books are:\n1.Economics .\n2.Sociology.\n3.Social Work.\n4.Islamic History .\n========\n");
    printf("------------------------\nBookshelf Level-> C2\nName of the Books are:\n1.Economics 1st & 2nd paper.\n2.Sociology1st & 2nd paper.\n3.Social Work 1st & 2nd paper.\n4.Islamic History 1st & 2nd paper.\n========\n");
    }
    }
    if(x==2){
    printf("------------------------\nBookshelf Level-> D1\n1.Anna Karenina.\n2.One Hundred Years of Solitude.\n3.Bished Sindhu.\n4.Aagoor Dorpo Mopi.\n========\n");
    }
    if(x==3){
    printf("------------------------\nBookshelf Level-> D2\n\n1.Pishach Kahini.\n2.Nilkamal Ar Lalkamal.\n3.Ibrahim\n4.Dorjoy 12.\n========\n");
    }
    if(x==4){
    printf("------------------------\nBookshelf Level-> D3\n\n1.A Legacy of Blood.\n2.Khettorer Bongali.\n3.History of Bangladesh\n4.Empire of the Mughal\nBooks Bangla Product 12.\n========\n");
    }
}

void searchbook(){
    char y[30]="science";
    char z[30]="commerce";
    char w[30]="arts";
    char e[30]="fiction";
    char f[30]="comic";
    char g[30]="history";
    printf(">>Search older books & write books category:\n");
    char x[30];
    scanf("%s",&x);
    if(strcmp(x,y)==0){
    printf("\n\n\n------------------------\nBookshelf Level-> A1\nName of the Books are:\n1.Physics.\n2.Chemistry.\n3.Math.\n4.Biology.\n===============\n");
    printf("------------------------\nBookshelf Level-> A2\nName of the Books are:\n1.Physics 1st & 2nd paper.\n2.Chemistry 1st & 2nd paper.\n 3.Math 1st & 2nd.\n4.Biology 1st & 2nd.\n===============\n");
    }
```

```c
    }
    if(strcmp(x,x)==0){
        printf("\n-------------------------------------------\nBookshelf Level-> 01\nName of the Books are:\n1.Accounting .\n2.Business organization and Management.\n3.Production Management and Marketing.\n=========================================");
        printf("\n-------------------------------------------");
        printf("\nBookshelf Level-> 02\n");
        printf("Name of the Books are:");
        printf("1.Accounting 1st & 2nd paper.\n");
        printf("2.Business organization and Management 1st & 2nd paper.\n");
        printf("3.Production Management and Marketing 1st & 2nd paper.\n");
        printf("=========================================\n");
    }
    if(strcmp(x,w)==0){
        printf("-------------------\nBookshelf Level-> C1\nName of the Books are:\n1.Economics .\n2.Sociology.\n3.Social Work.\n4.Islamic History .\n===============");
        printf("-------------------\nBookshelf Level-> C2\nName of the Books are:\n1.Economics 1st & 2nd paper.\n2.Sociology1st & 2nd paper.\n3.Social Work 1st & 2nd paper.\n4.Islamic History 1st & 2nd paper.\n===========");
    }
    if(strcmp(x,e)==0){
        printf("-------------------\nBookshelf Level-> 01\n1.Anna Karenina.\n2.One Hundred Years of Solitude.\n3.Bished Sindbu.\n4.Amour Dorer Mayi.\n===============");
    }
    if(strcmp(x,f)==0){
        printf("-------------------\nBookshelf Level-> 02\n.Pishach Kahini .\n2.NUlkemol Ar LeUkemol.\n3.Ibrahim\n4.Daring 12.\n=========");
    }
    if(strcmp(x,g)==0){
        printf("-------------------\nBookshelf Level-> 03\n.A Legacy of Blood.\n2.Khettorer Birpali.\n3.History of Bangladesh\n4.Empire of the Moghul\nBooks Angels Graded 12.\n===========");
    }
    else{
        printf(">>Not matched Categories");
    }
    }
}

void main()

void main()
{
    islogin();
    int c, emp,input;
    do
    {
        printf("\n\t---------\n\tMAIN MENU\n\t---------\n");
        printf("\n\t1. INSERT NEW BOOK\n\t2. DISPLAY THE BOOKs\n\t3. SEARCH THE BOOK");
        printf("\n\t4. DELETE THE BOOK\n\t5. UPDATE THE BOOK\n\t6. SORT");
        printf("\n\t7.Show Older books in Library.");
        printf("\n\t8.Search Older books in Library(only for older book).");
        printf("\n\t9. EXIT");
        printf("\n\n\t------------------------------------------------\n");
        printf("\nEnter your choice:");
        scanf("%d", &c);
        printf("\n");
        switch (c)
        {
        case 1:
            insert();
            break;
        case 2:
            emp = empty();
            if (emp == 0)
                printf("\nThe file is EMPTY\n");
            else
                disp();
            break;
```

```c
384       case 3:
385        search();
386        break;
387       case 4:
388        deletefile();
389        break;
390       case 5:
391        update();
392        break;
393       case 6:
394        emp = empty();
395        if (emp == 0)
396         printf("\n The file is EMPTY\n");
397        else
398         sort();
399        break;
400         case 7:
401         menu();
402         break;
403         case 8:
404         searchbook();
405         break;
406       case 9:
407        exit(1);
408        break;
409       default:
410        printf("\nYour choice is wrong\nPlease try again...\n");
411        break;
412       }
413      printf("\n>>Are you want to continue,please press 5 or 6 : ");
414      scanf("%d",&input);
```

```c
406         case 9:
407        exit(1);
408        break;
409       default:
410        printf("\nYour choice is wrong\nPlease try again...\n");
411        break;
412       }
413      printf("\n>>Are you want to continue,please press 5 or 6 : ");
414      scanf("%d",&input);
415     } while(input==5|| input==6);
416   }
417
418
419
420
421   //code by Faysal Sarder(515)
422   //City university
423   |
```