

Kitap Kütüphanesi Projesi

Kullanıcıdan kitap ismi,yazar ismi ve kitabın ISBN numarasını alarak bunu struct yapısı içerisindeki kütüphane dizisine kaydeden ve C programlama dilini kullandığım bu projeyi kodlama becerilerimi geliştirmek için yaptım.

Kullanılan Veri Yapıları

Verileri struct yapısı içerisinde tuttum.Kütüphane dizi ile bu structa bağladım.İşte ekran görüntüsü:

```
9 struct book_info
10 {
11     char name[75];
12     char writer[75];
13     int ISBN;
14 };
15 struct book_info kutuphane[100];
16 struct book_info book_update;
17
```

Kullanılan Fonksiyonlar

1-Add Books

Bu fonksiyon ile struct yapısı içerisinde kullanıcının girdiği bilgileri kaydetmeyi amaçladım.

```
18 void add_books(struct book_info *kutuphane, int *Number_books)
19 {
20     if (*Number_books < 100)
21     {
22         printf("enter book name that you want to add\n");
23         getchar();
24         // fgets(kutuphane[numbers_book].name, sizeof(kutuphane[numbers_book].name), stdin);
25         // ÖNCE FGGETS İ DENEYİM AMA YAZDIGIM SEYDEN SONRA 2 KERE ENTER BASHAM GEREKİYORDU.
26         gets(kutuphane[*Number_books].name); // https://www.geeksforgeeks.org/scanfns-str-vs-getsstr-in-c-with-examples/
27         printf("enter man's name that who writer on your book\n");
28         // fgets(kutuphane[numbers_book].writer, sizeof(kutuphane[numbers_book].writer), stdin);
29         gets(kutuphane[*Number_books].writer);
30         printf("enter ISBN your book that you want to add\n");
31         scanf("%d", &kutuphane[*Number_books].ISBN);
32
33         (*Number_books)++;
34         printf("now we will show you informations that you just have entered book information\n");
35
36         printf("book name : %s\n", kutuphane[*Number_books - 1].name); // index olarak diziler sıfırdan baslar
37         printf("book writer : %s\n", kutuphane[*Number_books - 1].writer);
38         printf("book ISBN : %d\n", kutuphane[*Number_books - 1].ISBN);
39
40         printf("Thanks your book adding.");
41     }
42     else
43     {
44         printf("you reach the max_books number,we can't add your book informations sorry about that miieenn :( ");
45     }
46
47     FILE *fileBooks;
48
49     fileBooks = fopen("libraryLists.txt", "a");
50     fprintf(fileBooks, "%s,%s,%d\n", kutuphane[*Number_books - 1].name, kutuphane[*Number_books - 1].writer, kutuphane[*Number_books - 1].ISBN);
51     fclose(fileBooks);
}
```

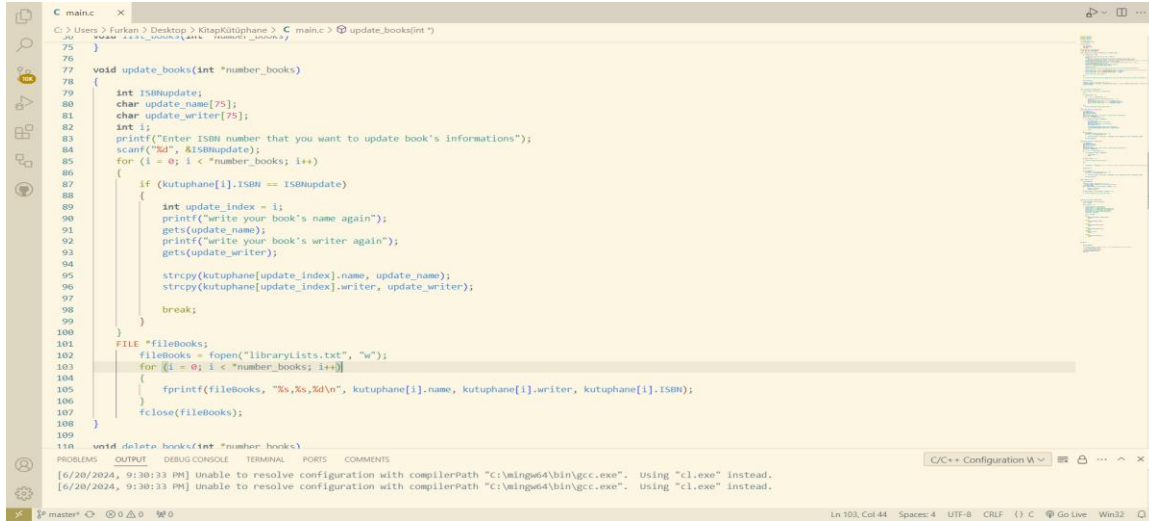
2-List Books

Bu fonksiyon ile kullanıcının menü arayüzünde kaydedilen kitapları liste halinde görüntülemesini amaçladım.

```
56 void list_books(int *Number_books)
57 {
58     printf("\nBooks informations in library\n\n");
59
60     int i;
61
62     if (*Number_books > 0)
63     {
64         for (i = 0; i < *Number_books; i++)
65         {
66             printf("*****%d.book information*****\n", i + 1);
67             printf("\n");
68             printf("%d.book name: %s\n", i + 1, kutuphane[i].name);
69             printf("%d.book writer: %s\n", i + 1, kutuphane[i].writer);
70             printf("%d.book ISBN: %d\n", i + 1, kutuphane[i].ISBN);
71         }
72     }
73     else
74         printf("kutuphanede kayitli kitap yoktur");
75 }
76
```

3-Update Books

Bu fonksiyon ile kullanıcının ISBN nosu ile kitap ismini ve yazarını güncelleyebilmesini amaçladım.



```
C main.c x
C:\Users\Furkan\Desktop> KitapKutuphane > C main.c > update_books(int *)
76
77 void update_books(int *number_books)
78 {
79     int ISBNupdate;
80     char update_name[75];
81     char update_writer[75];
82     int i;
83     printf("Enter ISBN number that you want to update book's informations");
84     scanf("%d", &ISBNupdate);
85     for (i = 0; i < *number_books; i++)
86     {
87         if (kutuphane[i].ISBN == ISBNupdate)
88         {
89             int update_index = i;
90             printf("write your book's name again");
91             gets(update_name);
92             printf("write your book's writer again");
93             gets(update_writer);
94             strcpy(kutuphane[update_index].name, update_name);
95             strcpy(kutuphane[update_index].writer, update_writer);
96             break;
97         }
98     }
99
100     FILE *fileBooks;
101     fileBooks = fopen("libraryLists.txt", "w");
102     for (i = 0; i < *number_books; i++)
103     {
104         fprintf(fileBooks, "%s,%s,%d\n", kutuphane[i].name, kutuphane[i].writer, kutuphane[i].ISBN);
105     }
106     fclose(fileBooks);
107 }
108
109
110 void delete_books(int *number_books)
111 {
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

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[6/20/2024, 9:30:33 PM] unable to resolve configuration with compilerPath "c:\mingw64\bin\gcc.exe". Using "cl.exe" instead.

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4-Delete Books

Bu fonksiyon ile kullanıcının ISBN nosu girerek kitap silebilmesini amaçladım.

```
110 void delete_books(int *number_books)
111 {
112     int ISBNdelete;
113     char delete_name[75];
114     char delete_writer[75];
115     int i;
116     int delete_index;
117     printf("Enter ISBN number that you want to delete book's informations");
118     scanf("%d", &ISBNdelete);
119     for (i = 0; i < *number_books; i++)
120     {
121         if (kutuphane[i].ISBN == ISBNdelete)
122         {
123             delete_index = i;
124             break;
125         }
126     }
127     if (delete_index == -1)
128     {
129         printf("not match found try again");
130     }
131     else
132     {
133         kutuphane[i] = kutuphane[i + 1]; // burda amac indexini buldugumuz seyi kaydırmak alta.Yani oldu simdi onun yerine bi sonrak geldi ve kaydı sıra düzgün bir sekilde
134     }
135     *number_books--;}
136
137 FILE *fileBooks;
138 fileBooks = fopen("libraryLists.txt", "w");
139 for (i = 0; i < *number_books; i++)
140 {
141     fprintf(fileBooks, "%s,%s,%d\n", kutuphane[i].name, kutuphane[i].writer, kutuphane[i].ISBN);
142 }
143 fclose(fileBooks);
144 }
```

5-List Books From File

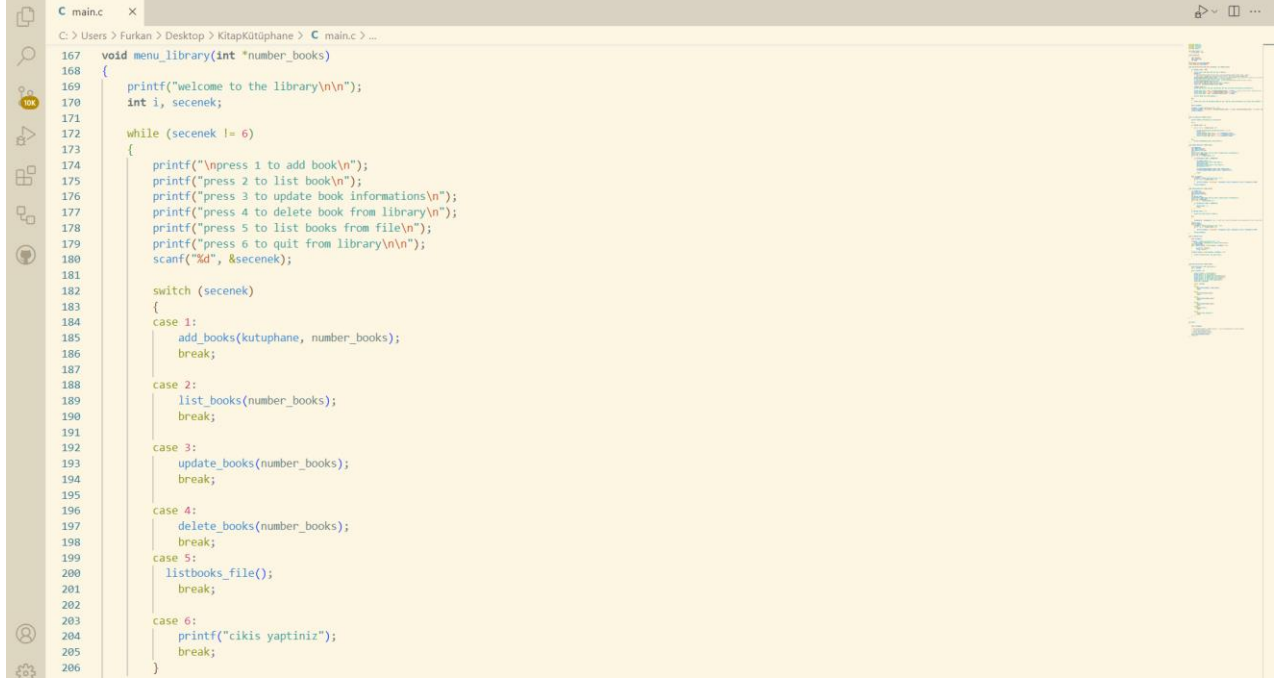
Bu fonksiyon ile kullanıcının kaydetmek için girdiği kitapları bir dosya içinde kaydetmesini amaçladım.

```
void listbooks_file()
{
    FILE *fileBooks;

    fileBooks = fopen("libraryLists.txt", "r");
    printf("Books informations in library from file\n");
    char reading[100];
    while (fgets(reading, sizeof(reading), fileBooks) != 0)
    {
        printf("%s", reading);
        printf("\n\n");
    }
    if(fgets(reading, sizeof(reading), fileBooks) == 0)
    {
        printf("\n\nthere aren't any books here");
    }
}
```

6-Menü Fonksiyonu

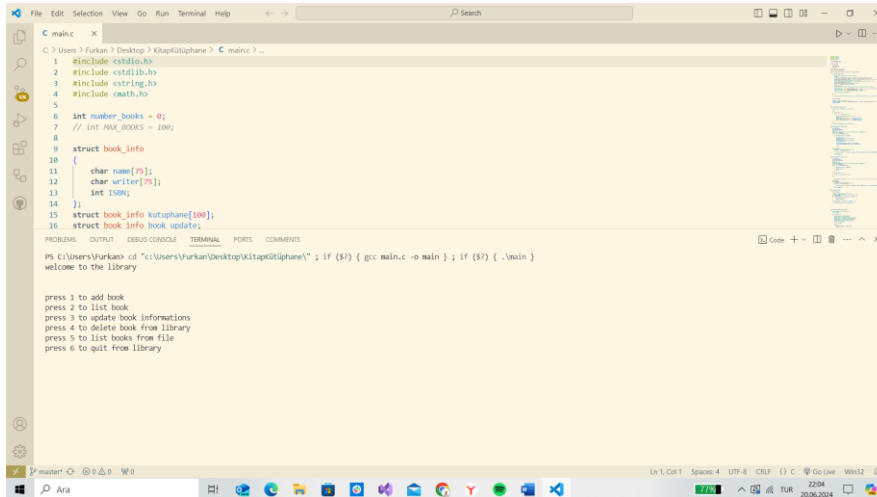
Bu fonksiyonu kullanıcının basit bir şekilde bu fonksiyonlar arasında kütüphaneyi kullanabilmesi adına oluşturdum.



```
C main.c
C:\Users\Furkan > Desktop > KitapKütüphane > C main.c > ...
167 void menu_library(int *number_books)
168 {
169     printf("welcome to the library\n\n");
170     int i, secenek;
171
172     while (secenek != 6)
173     {
174         printf("\npress 1 to add book\n");
175         printf("press 2 to list book\n");
176         printf("press 3 to update book informations\n");
177         printf("press 4 to delete book from library\n");
178         printf("press 5 to list books from file\n");
179         printf("press 6 to quit from library\n\n");
180         scanf("%d", &secenek);
181
182         switch (secenek)
183         {
184             case 1:
185                 add_books(kutuphane, number_books);
186                 break;
187             case 2:
188                 list_books(number_books);
189                 break;
190             case 3:
191                 update_books(number_books);
192                 break;
193             case 4:
194                 delete_books(number_books);
195                 break;
196             case 5:
197                 listbooks_file();
198                 break;
199             case 6:
200                 printf("cikis yaptiniz");
201                 break;
202         }
203     }
204 }
205
206
```

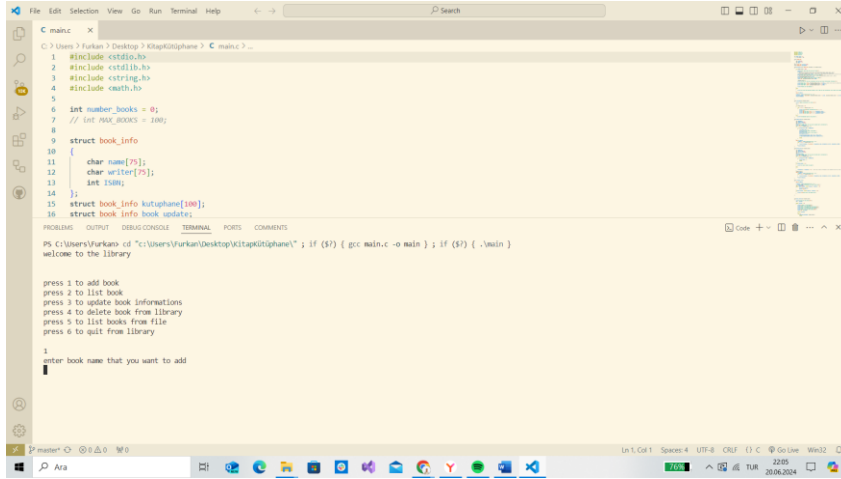
Örnek program çıktıları

İlk çalışma ve menünün ortaya çıkması

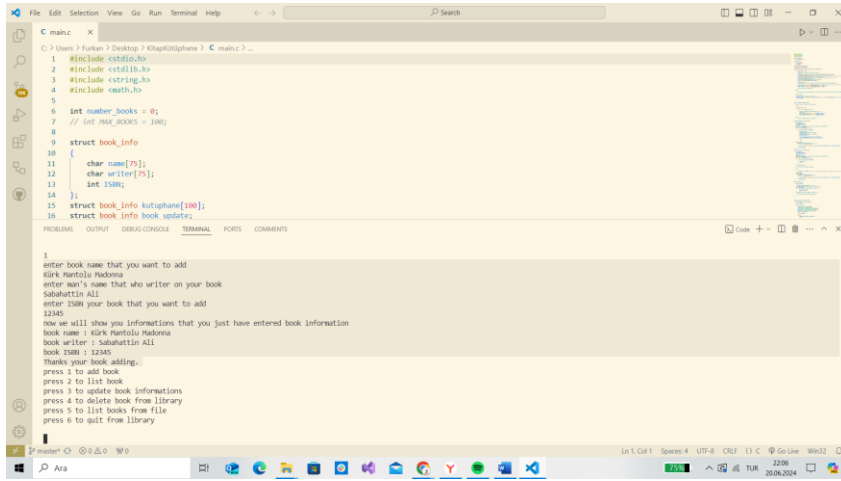


```
C main.c
C:\Users\Furkan > Desktop > KitapKütüphane > C main.c > ...
1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <string.h>
4 #include <math.h>
5
6 int number_books = 0;
7 // int MAX_BOOKS = 100;
8
9 struct book_info
10 {
11     char name[75];
12     char writer[75];
13     int ISBN;
14 };
15 struct book_info kutuphane[100];
16 struct book_info book_update;
17
18 PS C:\Users\Furkan> cd "C:\Users\Furkan\Desktop\KitapKütüphane"; if ($?) { gcc main.c -o main }; if ($?) { .\main }
welcome to the library
press 1 to add book
press 2 to list book
press 3 to update book informations
press 4 to delete book from library
press 5 to list books from file
press 6 to quit from library
```

1 seçeneğini tıklayarak kitap ekleme

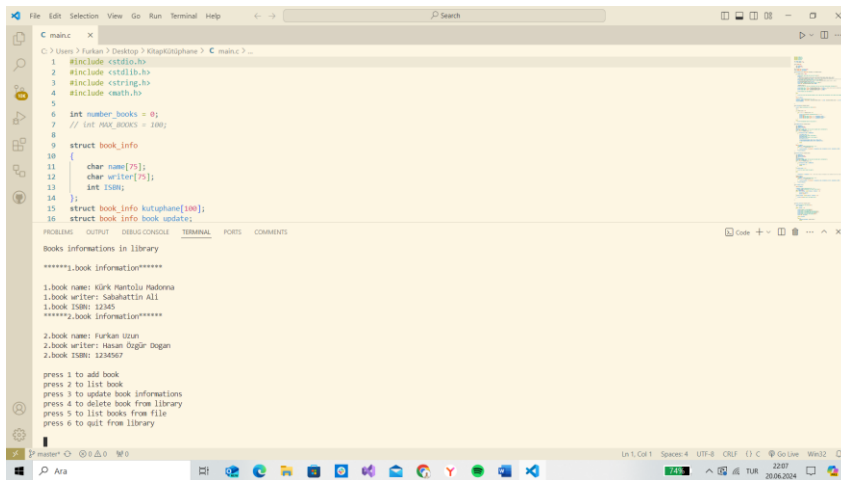


```
C:\Users> Furkan > Desktop > Kütüphane > C main.c > ...
1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <string.h>
4 #include <math.h>
5
6 int number_books = 0;
7 // int MAX_BOOKS = 100;
8
9 struct book_info
10 {
11     char name[75];
12     char writer[75];
13     int ISBN;
14 };
15 struct book_info kutuphane[100];
16 struct book_info book updates;
17
18 int main()
19 {
20     printf("Welcome to the library\n");
21
22     printf("press 1 to add book\n");
23     printf("press 2 to list book\n");
24     printf("press 3 to update book informations\n");
25     printf("press 4 to delete book from library\n");
26     printf("press 5 to list books from file\n");
27     printf("press 6 to quit from library\n");
28
29     printf("enter book name that you want to add\n");
30     return 0;
31 }
```



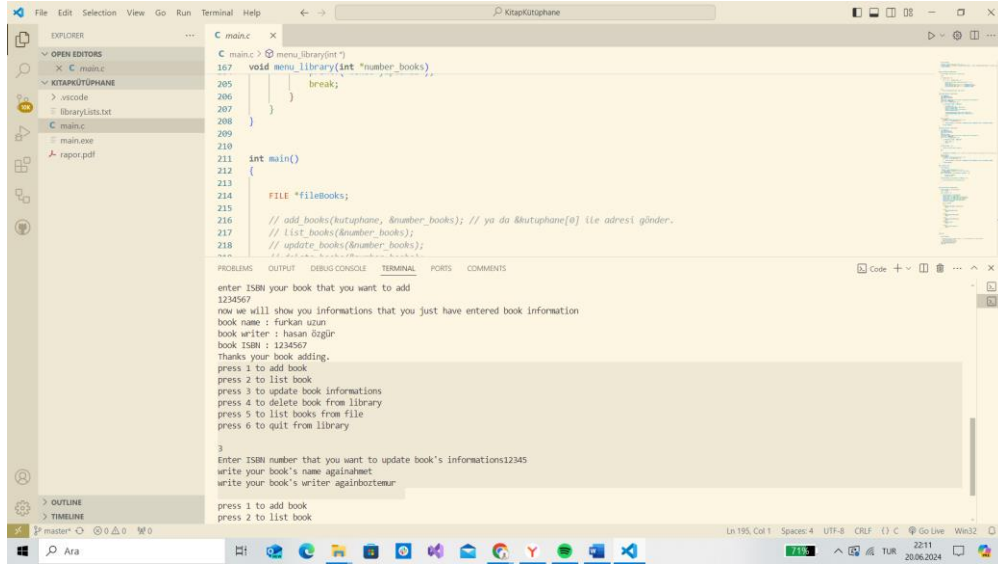
```
1
2 enter book name that you want to add
3 kirk mantolu hadana
4 enter writer's name that who writer on your book
5 Sabahattin Ali
6 enter ISBN your book that you want to add
7 12345
8
9 now we will show you informations that you just have entered book information
10 book name : kirk mantolu hadana
11 book writer : Sabahattin Ali
12 book ISBN : 12345
13 Thanks your book adding..
14
15 press 1 to add book
16 press 2 to list book
17 press 3 to update book informations
18 press 4 to delete book from library
19 press 5 to list books from file
20 press 6 to quit from library
21
22
```

2 seçeneğini tıklayarak eklenen kitapları terminalden listeleme



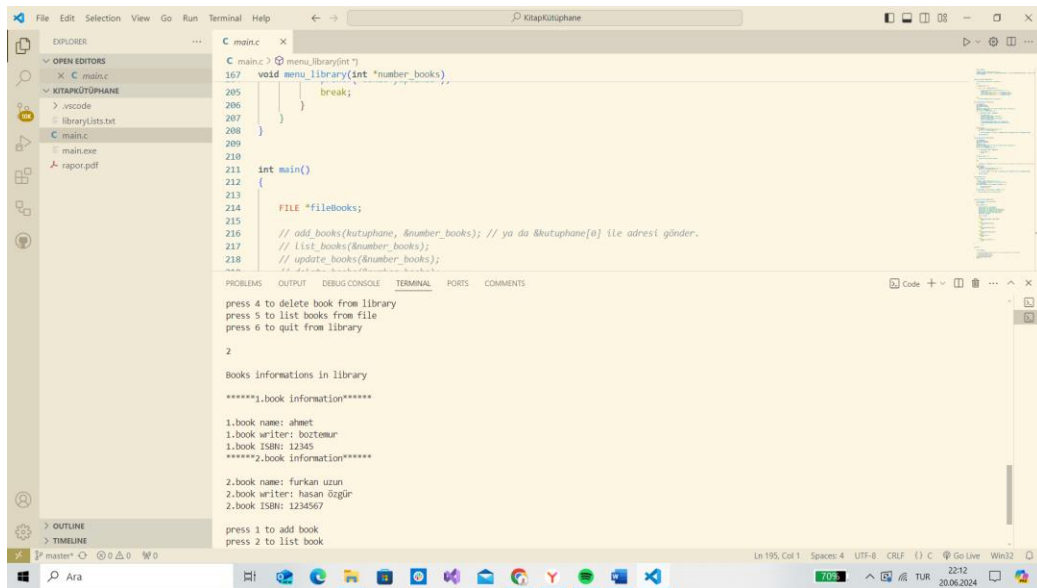
```
1
2
3 books informations in library
4
5 *****1.book information*****
6 1.book name: kirk mantolu hadana
7 1.book writer: Sabahattin Ali
8 1.book ISBN: 12345
9 *****2.book information*****
10 2.book name: Furkan uzun
11 2.book writer: Hasan Ogür Dogan
12 2.book ISBN: 1234567
13
14 press 1 to add book
15 press 2 to list book
16 press 3 to update book informations
17 press 4 to delete book from library
18 press 5 to list books from file
19 press 6 to quit from library
20
21
```

3 seçeneği ile kitap güncelleme



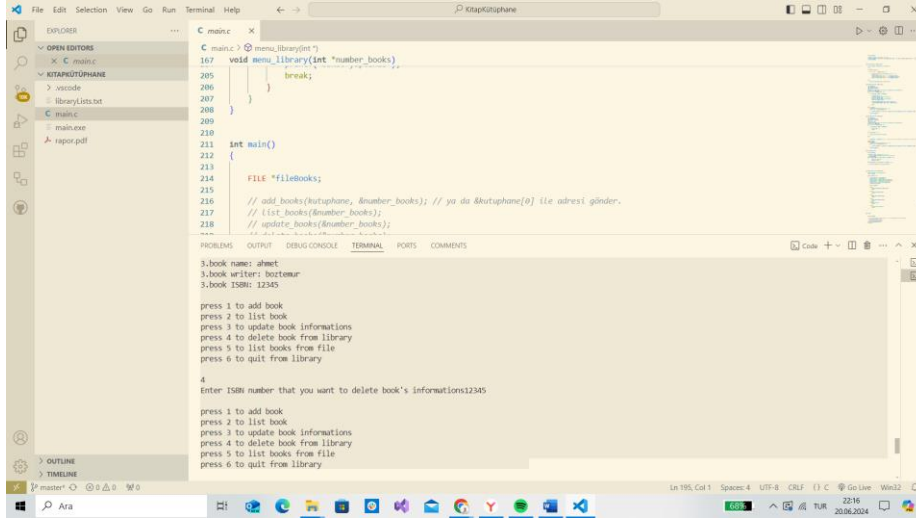
```
167 void menu_library(int *number_books),
205     }
206     break;
207 }
208 }
209
210 int main()
211 {
212     FILE *fileBooks;
213
214     // add_books(kutuphane, &number_books); // ya da &kutuphane[0] ile adresi gönder.
215     // list_books(&number_books);
216     // update_books(&number_books);
217
218     enter ISBN your book that you want to add
219     1234567
220     now we will show you informations that you just have entered book information
221     book name : furkan uzun
222     book writer : hasan özgür
223     book ISBN : 1234567
224     Thanks your book adding.
225     press 1 to add book
226     press 2 to list book
227     press 3 to update book informations
228     press 4 to delete book from library
229     press 5 to list books from file
230     press 6 to quit from library
231
232     3
233     Enter ISBN number that you want to update book's informations12345
234     write your book's name againahmet
235     write your book's writer againboztumur
236
237     press 1 to add book
238     press 2 to list book
```

2 seçeneği ile kitap güncellenmiş mi diye bakalım?



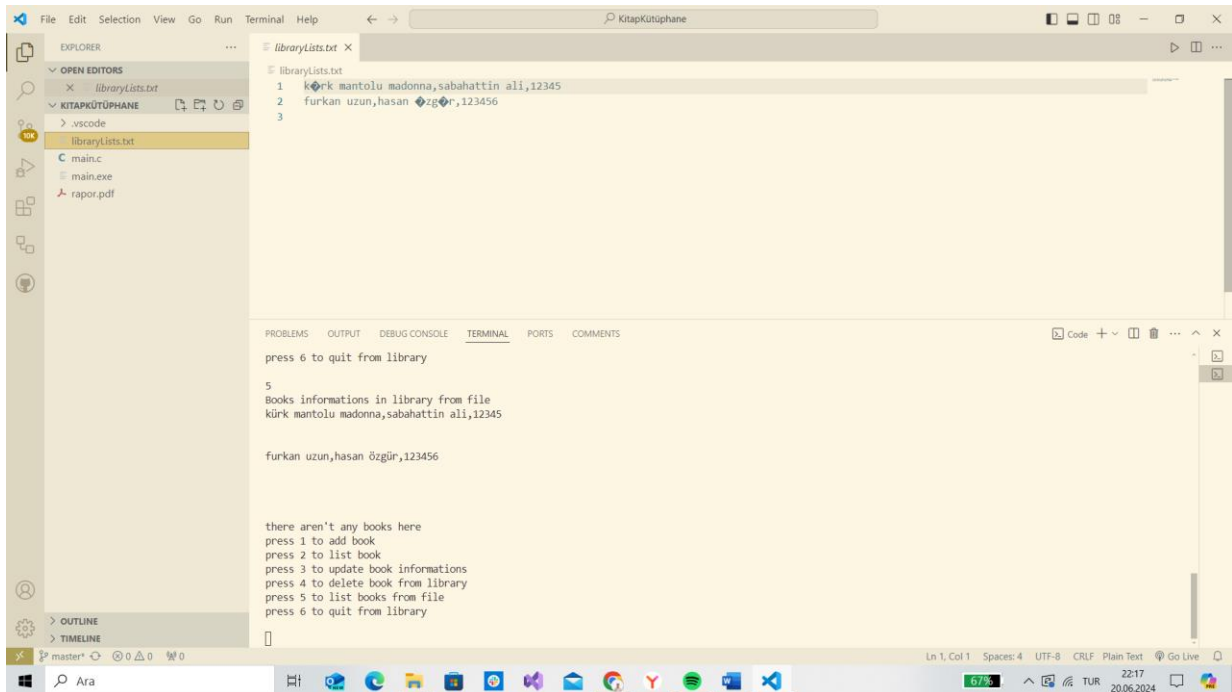
```
press 4 to delete book from library
press 5 to list books from file
press 6 to quit from library
2
Books informations in library
*****1.book information*****
1.book name: ahmet
1.book writer: boztumur
1.book ISBN: 12345
*****2.book information*****
2.book name: furkan uzun
2.book writer: hasan özgür
2.book ISBN: 1234567
press 1 to add book
press 2 to list book
```

4 seçeneği ile kitap silme



```
C main.c > menu_library(int *)
167 void menu_library(int *number_books)
168 {
169     break;
170 }
171
172 int main()
173 {
174     FILE *fileBooks;
175     // add_books(kutuphane, &number_books); // ya da &kutuphane[0] ile adresi gönder.
176     // list_books(&number_books);
177     // update_books(&number_books);
178
179     3.book name: ahmet
180     3.book writer: bostemur
181     3.book ISBN: 12345
182
183     press 1 to add book
184     press 2 to list book
185     press 3 to update book informations
186     press 4 to delete book from library
187     press 5 to list books from file
188     press 6 to quit from library
189
190     4
191     Enter ISBN number that you want to delete book's informations:12345
192
193     press 1 to add book
194     press 2 to list book
195     press 3 to update book informations
196     press 4 to delete book from library
197     press 5 to list books from file
198     press 6 to quit from library
```

5 seçeneği ile dosyadan kaydedilen kitapları görelim



```
libraryLists.txt
1 kürk mantolu madonna,sabahattin ali,12345
2 furkan uzun,hasan özgür,123456
3
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