



**Yıldız Teknik Üniversitesi**  
**Elektrik-Elektronik Fakültesi**  
**Bilgisayar Mühendisliği Bölümü**

**BLM1031 Yapısal Programlama**  
**Dönem Projesi Raporu**  
**Kütüphane Otomasyonu**  
**Gr: 1**

**Dr. Öğretim Üyesi YUNUS EMRE SELÇUK**

**İsim:** Nasrullah Toprak  
**Öğrenci No:** .....  
**E-posta:** .....  
**Telefon No:** .....

## Drive Linki:

[https://drive.google.com/file/d/1TpyGFiUBadHIMwKb2fNAQyuanzPs3QJr/view?usp=drive\\_link](https://drive.google.com/file/d/1TpyGFiUBadHIMwKb2fNAQyuanzPs3QJr/view?usp=drive_link)

## Ana Menü

Menü, kullanıcının istediği seçeneği girmesine olanak tanır. "15. Save and Exit" seçeneği, kullanıcının yaptığı tüm değişiklikleri kaydetmesini ve programdan güvenli bir şekilde çıkmasını sağlar.

```
1. Add/Delete/Update Student
2. View Student Information
3. List Students Who Haven't Returned Books
4. List Penalized Students
5. List All Studnets
6. Borrow/Return Book
7. Add/Delete/Update Book
8. View Book Information
9. List Books on the Shelf
10. List Books Not Returned on Time
11. Match Book and Author
12. Update the Book's Author
13. Add/Delete/Update Author
14. View Author Information
15. Save and Exit
CHOICE: 18
Wrong Choice number
```

```
1. Add/Delete/Update Student
2. View Student Information
3. List Students Who Haven't Returned Books
4. List Penalized Students
5. List All Studnets
6. Borrow/Return Book
7. Add/Delete/Update Book
8. View Book Information
9. List Books on the Shelf
10. List Books Not Returned on Time
11. Match Book and Author
12. Update the Book's Author
13. Add/Delete/Update Author
14. View Author Information
15. Save and Exit
CHOICE: 15
```

```
Yazarlar.csv is saved
Ogrenciler.csv is saved
Kitaplar.csv is saved
KitapOrnekleri.csv is saved
KitapYazar.csv is saved
KitapOdunc.csv is saved
```

İşlem yapılmadan önce ilgili .csv dosyaları, işlem, ve işlemten sonra oluşan değişiklikler bir sonraki sayfadan itibaren ayrıntı bir şekilde yazmaktadır:

## 1. Öğrenci Ekleme/Silme/Güncelleme

### 1.1. Öğrenci Ekleme

```
CHOICE: 1
1. Add Student
2. Delete Student
3. Update Student
CHOICE: 1
Enter student ID: 24011000
Enter name: Namik
Enter surname: Kemal
Student is added successfully
```

Önceki (Ogrenciler.csv)					Sonraki (Ogrenciler.csv)				
12	23511623	Sezen	Aksu	100	12	23511623	Sezen	Aksu	100
13	22014099	Yıldız	Tilbe	70	13	22014099	Yıldız	Tilbe	70
14	15013134	Nepet	Ertap	60	14	15013134	Nepet	Ertap	60
15	25012034	Ybrahim	Tatlyses	50	15	25012034	Ybrahim	Tatlyses	50
16	23011084	Müslüm	Gürses	100	16	23011084	Müslüm	Gürses	100
17	22516120	Ferdi	Tayfur	90	17	22516120	Ferdi	Tayfur	90
18					18	24011000	Namik	Kemal	100
19					19				

```
CHOICE: 1
1. Add Student
2. Delete Student
3. Update Student
CHOICE: 1
Enter student ID: 23011084
Student with this ID already exists.
```

### 1.2. Öğrenci Silme

```
CHOICE: 1
1. Add Student
2. Delete Student
3. Update Student
CHOICE: 2
Enter id: 10202512
Enter name: Mahmut
Enter surname: Yilmaz
Student with ID 10202512 and name surname Mahmut Yilmaz not found.
```

6	17011010	Ross	Girshick	100
7	17011015	Trevor	Hastie	100
8	17011020	Yann	LeCun	100
9	12055510	Mahmut	Tuncer	100
10	10202512	Abdullah	Yilmaz	100
11	20012017	Murat	Gödebaka	88
12	23511623	Sezen	Aksu	100
13	22014099	Yıldız	Tilbe	70

(Ad yanlış girilmiş)

```

CHOICE: 1
1. Add Student
2. Delete Student
3. Update Student
CHOICE: 2
Enter id: 10202512
Enter name: Abdullah
Enter surname: Yilmaz
Student with id: 10202512 is deleted successfully

```

Öncesi	Sonrası
(Ogrenciler.csv)	(Ogrenciler.csv)
6 17011010 Ross Girshick 100	6 17011010 Ross Girshick 100
7 17011015 Trevor Hastie 100	7 17011015 TREVOR HASTIE. 100
8 17011020 Yann LeCun 100	8 17011020 Yann LeCun 100
9 12055510 Mahmut Tuncer 100	9 12055510 Mahmut Tuncer 100
10 10202512 Abdullah Yilmaz 100	10 20012017 Murat Göđebaka 88
11 20012017 Murat Göđebaka 88	11 23511623 Sezen Aksu 100
12 23511623 Sezen Aksu 100	12 22014099 Yýldýz Tilbe 70
(KitapOrnekleri.csv)	(KitapOrnekleri.csv)
1 123456789101 Rafta	1 12345678 Rafta
2 123456789101 10202512	2 12345678 Rafta
3 123456789101 Rafta	3 12345678 Rafta
4 123456789101 Rafta	4 12345678 Rafta

### 1.3. Öğrenci Güncelleme

```

1. Add Student
2. Delete Student
3. Update Student
CHOICE: 3
Enter id of the student: 17011015
OLD INFORMATION: Name: Trevor ; Surname: Hastie
Do you want to change name? (1: yes -1: no) 1
Enter new name: TREVOR
Do you want to change surname? (1: yes -1: no) -1
Enter new name: HASTIE.

```

Öncesi (Ogrenciler.csv)	Sonrası (Ogrenciler.csv)
6 17011010 Ross Girshick 100	6 17011010 Ross Girshick 100
7 17011015 Trevor Hastie 100	7 17011015 TREVOR HASTIE. 100
8 17011020 Yann LeCun 100	8 17011020 Yann LeCun 100
9 12055510 Mahmut Tuncer 100	9 12055510 Mahmut Tuncer 100

## 2. Öğrenci Bilgisi Görüntüleme

İd bilgisi ile öğrenci bilgisi görüntüleme:

```

CHOICE: 2
Seatch by id (1) or seatch by name and surname (2) : 1
Enter id: 18011001
Student name surname: Geoffrey Hinton
Grade: 100
Student Borrow book Finallerin Gazabi of ISBN: 1478523691234 (book count 3) at 18, 2,2023

```

Öğrenci adı ve soyadı ile öğrenci bilgisi görüntüleme:

```
CHOICE: 2
Seatch by id (1) or seatch by name and surname (2) : 2
Enter name: Geoffrey
Enter surname: Hinton
Student foundStudent name surname: Geoffrey Hinton
Grade: 100
Student Borrow book Finallerin Gazabi of ISBN: 1478523691234 (book count 3) at 18, 2,2023
```

	A	B	C	D
1	18011001	Geoffrey	Hinton	100
2	18011005	Yoshua	Bengio	100
3	18011010	Robert	Tibshirani	on

Öğrenciler.csv

17	7669545841623_3	22014099	0	20.12.2022
18	1478523691234_3	18011001	0	18.02.2023
19	9780140449334_2	10202512	0	18.02.2023

KitapOdunc.csv

12	1478523691234_1	Rafta	
13	1478523691234_2	17011015	
14	1478523691234_3	18011001	
15	7669545841623_1	Rafta	
16	7669545841623_2	Rafta	

KitapOrnekleri.csv

### 3. Kitap Teslim Etmemiş Öğrencileri Listele:

```
CHOICE: 3
Name: Sezen Surname: Aksu ID: 23511623
Name: TREVOR Surname: HASTIE. ID: 17011015
Name: Robert Surname: Tibshirani ID: 18011010
Name: M³sl³m Surname: G³rses ID: 23011084
Name: Murat Surname: G÷-ebakan ID: 20012017
Name: TREVOR Surname: HASTIE. ID: 17011015
Name: Ferdi Surname: Tayfur ID: 22516120
Name: Sezen Surname: Aksu ID: 23511623
Name: Ferdi Surname: Tayfur ID: 22516120
Name: İbrahim Surname: Tatlıses ID: 25012034
Name: Y³ld³z Surname: Tilbe ID: 22014099
Name: Geoffrey Surname: Hinton ID: 18011001
Name: Sezen Surname: Aksu ID: 23511623
Name: İlya Surname: Sutskever ID: 18011020
Name: Mehmet Surname: Ertaş ID: 15013134
Name: Robert Surname: Tibshirani ID: 18011010
```

### 4. Cezalı Öğrencileri Listele:

```
CHOICE: 4
Name: Andrew Surname: Zisserman ID: 17011001
Total 1 student(s) is/are penalized
```

3	18011010	Robert	Tibshirani	90
4	18011020	İlya	Sutskever	100
5	17011001	Andrew	Zisserman	-10
6	17011010	Ross	Girshick	100
7	17011015	TREVOR	HASTIE	100

Oğrenciler.csv

## 5. Tüm Öğrencileri Listele:

```

ID: Save and Exit
CHOICE: 5
Name & Surname: Geoffrey Hinton
ID: 18011001
Grade100

Name & Surname: Yoshua Bengio
ID: 18011005
Grade100

Name & Surname: Robert Tibshirani
ID: 18011010
Grade90

Name & Surname: Ilya Sutskever
ID: 18011020
Grade100

Name & Surname: Andrew Zisserman
ID: 17011001
Grade-10

Name & Surname: Ross Girshick
ID: 17011010
Grade100

Name & Surname: TREVOR HASTIE.
ID: 17011015
Grade100

Name & Surname: Yann LeCun
ID: 17011020
Grade100

Name & Surname: Mahmut Tuncer
ID: 12055510
Grade100

Name & Surname: Murat Gödebakan
ID: 20012017
Grade88

Name & Surname: Sezen Aksu
ID: 23511623
Grade100

Name & Surname: Yıldız Tilbe
ID: 22014099
Grade70

Name & Surname: Mehmet Ertan
ID: 15013134
Grade60

Name & Surname: İbrahim Tatlıses
ID: 25012034
Grade50

Name & Surname: Müslüm Gürses
ID: 23011084
Grade100

Name & Surname: Ferdi Tayfur
ID: 22516120
Grade90

Name & Surname: Namik Kemal
ID: 24011000
Grade100

```

1	18011001	Geoffrey	Hinton	100
2	18011005	Yoshua	Bengio	100
3	18011010	Robert	Tibshirani	90
4	18011020	Ilya	Sutskever	100
5	17011001	Andrew	Zisserman	-10
6	17011010	Ross	Girshick	100
7	17011015	TREVOR	HASTIE.	100
8	17011020	Yann	LeCun	100
9	12055510	Mahmut	Tuncer	100
10	20012017	Murat	Gödebakan	88
11	23511623	Sezen	Aksu	100
12	22014099	Yıldız	Tilbe	70
13	15013134	Mehmet	Ertan	60
14	25012034	İbrahim	Tatlıses	50
15	23011084	Müslüm	Gürses	100
16	22516120	Ferdi	Tayfur	90
17	24011000	Namik	Kemal	100

Oğrenciler.csv

## 6. Kitap Ödünç Al Teslim Et:

### 6.1. Kitap Ödünç Al:

```
CHOICE: 6
Borrow Book (1); Return book (2)
CHOICE: 1
Enter id of student: 22014099
Enter book ISBN that you need to borrow: 1478523691234
Enter book no: 2
This book is currently borrowed by another student.
```

12	1478523691234_1	Rafta
13	1478523691234_2	17011015
14	1478523691234_3	18011001

KitapOrnekleri.csv

```
CHOICE: 6
Borrow Book (1); Return book (2)
CHOICE: 1
Enter id of student: 22014099
Enter book ISBN that you need to borrow: 1478523691234
Enter book no: 1
Book successfully borrowed.
```

12	1478523691234_1	22014099
13	1478523691234_2	17011015
14	1478523691234_3	18011001

KitapOrnekleri.csv

25	4054110263807_5	18011010	0	20.12.2022
26	1478523691234_1	22014099	0	27.05.2025
27				

KitapOdunc.csv (gün otomatik olarak hangi gün ödünç alınmışsa yazılır)

### 6.2. Kitap Teslim Al:

```
CHOICE: 6
Borrow Book (1); Return book (2)
CHOICE: 2
Enter student id: 18011020
Enter ISBN: 4001589630538
Enter book no: 2
```

Öncesi	Sonrası																																	
(KitapOdunc.csv)	(KitapOdunc.csv)																																	
<table><tr><td>22</td><td>9780140449335_3</td><td>17011015</td><td>1</td><td>20.01.2023</td></tr><tr><td>23</td><td>4001589630538_2</td><td>18011020</td><td>0</td><td>17.02.2023</td></tr><tr><td>24</td><td>6567502901954_1</td><td>15013134</td><td>0</td><td>15.01.2023</td></tr></table>	22	9780140449335_3	17011015	1	20.01.2023	23	4001589630538_2	18011020	0	17.02.2023	24	6567502901954_1	15013134	0	15.01.2023	<table><tr><td>25</td><td>4054110263807_5</td><td>18011010</td><td>0</td><td>20.12.2022</td></tr><tr><td>26</td><td>1478523691234_1</td><td>22014099</td><td>0</td><td>27.05.2025</td></tr><tr><td>27</td><td>4001589630538_2</td><td>18011020</td><td>1</td><td>27.05.2025</td></tr></table>	25	4054110263807_5	18011010	0	20.12.2022	26	1478523691234_1	22014099	0	27.05.2025	27	4001589630538_2	18011020	1	27.05.2025			
22	9780140449335_3	17011015	1	20.01.2023																														
23	4001589630538_2	18011020	0	17.02.2023																														
24	6567502901954_1	15013134	0	15.01.2023																														
25	4054110263807_5	18011010	0	20.12.2022																														
26	1478523691234_1	22014099	0	27.05.2025																														
27	4001589630538_2	18011020	1	27.05.2025																														
	Teslim Ettiğine dair bir bilgi eklendi																																	
(KitapOrnekleri.csv)																																		
<table><tr><td>36</td><td>4054110263807_6</td><td>Rafta</td></tr><tr><td>37</td><td>4001589630538_1</td><td>Rafta</td></tr><tr><td>38</td><td>4001589630538_2</td><td>18011020</td></tr><tr><td>39</td><td>4001589630538_3</td><td>Rafta</td></tr><tr><td>40</td><td>4001589630538_4</td><td>Rafta</td></tr></table>	36	4054110263807_6	Rafta	37	4001589630538_1	Rafta	38	4001589630538_2	18011020	39	4001589630538_3	Rafta	40	4001589630538_4	Rafta	<table><tr><td>36</td><td>4054110263807_6</td><td>Rafta</td></tr><tr><td>37</td><td>4001589630538_1</td><td>Rafta</td></tr><tr><td>38</td><td>4001589630538_2</td><td>Rafta</td></tr><tr><td>39</td><td>4001589630538_3</td><td>Rafta</td></tr><tr><td>40</td><td>4001589630538_4</td><td>Rafta</td></tr><tr><td>41</td><td>4001589630538_5</td><td>Rafta</td></tr></table>	36	4054110263807_6	Rafta	37	4001589630538_1	Rafta	38	4001589630538_2	Rafta	39	4001589630538_3	Rafta	40	4001589630538_4	Rafta	41	4001589630538_5	Rafta
36	4054110263807_6	Rafta																																
37	4001589630538_1	Rafta																																
38	4001589630538_2	18011020																																
39	4001589630538_3	Rafta																																
40	4001589630538_4	Rafta																																
36	4054110263807_6	Rafta																																
37	4001589630538_1	Rafta																																
38	4001589630538_2	Rafta																																
39	4001589630538_3	Rafta																																
40	4001589630538_4	Rafta																																
41	4001589630538_5	Rafta																																
	Kitap Rafa eklendi																																	

## 7. Kitap Ekle/Sil/Güncelle:

### 7.1. Kitap Sil:

```
CHOICE: 7
1. Add Book
2. Delete Book
3. Update book
CHOICE: 1
Enter book ISBN No: 7845792351578
Enter books name: Bilgisayarlar
how many books are there: 5
```

Öncesi

(Kitaplar.csv)

14	Zamanın Kısa Ta	6.57E+12	3
15	Her şeyin Teorisi	3.22E+12	3
16			

Sonrası

(Kitaplar.csv)

B16

:

✕

✓

fx

7845792351578

	A	B	C
13	Mesaj	2.59871E+12	2
14	Zamanın Kısa Ta	6.5675E+12	3
15	Her şeyin Teorisi	3.21902E+12	3
16	Bilgisayarlar	7.84579E+12	5

Teslim Ettiğine dair bir bilgi eklendi

(KitapOrnekleri.csv)

50	6567502901954_2	Rafta
51	6567502901954_3	Rafta
52	3219022972921_1	23511623
53	3219022972921_2	25012034
54	3219022972921_3	Rafta
55		

52	3219022972921_1	23511623
53	3219022972921_2	25012034
54	3219022972921_3	Rafta
55	7845792351578_1	Rafta
56	7845792351578_2	Rafta
57	7845792351578_3	Rafta
58	7845792351578_4	Rafta
59	7845792351578_5	Rafta

Kitap Rafa eklendi

### 7.2. Kitap Sil:

```
CHOICE: 7
1. Add Book
2. Delete Book
3. Update book
CHOICE: 2
Enter ISBN no: 8098255466027
Enter book name: Tehlike
Enter how many book are: 2
Book not found.
```

ISBN, kitap ismi veya numarası eksik veya yanlış ise kitap silinmez

6	Osman	5.1345E+12	20
7	Tehlikeli Oyunlar	8098255466027	2
8	Saatleri Ayarlama	8.13496E+12	4



```

CHOICE: 7
1. Add Book
2. Delete Book
3. Update book
CHOICE: 2
Enter ISBN no: 8098255466027
Enter book name: Tehlikeli Oyunlar
Enter how many book are: 2

```

(Bilgiler tam doğru olduğu sürece silme işlemi yapılır)

Öncesi	Sonrası																								
(Kitaplar.csv)	(Kitaplar.csv)																								
<table><tr><td>6</td><td>Osman</td><td>5.1345E+12</td><td>20</td></tr><tr><td>7</td><td>Tehlikeli Oyunlar</td><td>8098255466027</td><td>2</td></tr><tr><td>8</td><td>Saatleri Ayarlama</td><td>8.13496E+12</td><td>4</td></tr></table>	6	Osman	5.1345E+12	20	7	Tehlikeli Oyunlar	8098255466027	2	8	Saatleri Ayarlama	8.13496E+12	4	<table><tr><td>6</td><td>Osman</td><td>5.13E+12</td><td>20</td></tr><tr><td>7</td><td>Saatleri Ayarlama E</td><td>8.13E+12</td><td>4</td></tr><tr><td>8</td><td>Huzur</td><td>9.7E+12</td><td>3</td></tr></table>	6	Osman	5.13E+12	20	7	Saatleri Ayarlama E	8.13E+12	4	8	Huzur	9.7E+12	3
6	Osman	5.1345E+12	20																						
7	Tehlikeli Oyunlar	8098255466027	2																						
8	Saatleri Ayarlama	8.13496E+12	4																						
6	Osman	5.13E+12	20																						
7	Saatleri Ayarlama E	8.13E+12	4																						
8	Huzur	9.7E+12	3																						
(KitapOrnekleri.csv)																									
<table><tr><td>21</td><td>5134504975481_3</td><td>Rafta</td></tr><tr><td>22</td><td>8098255466027_1</td><td>Rafta</td></tr><tr><td>23</td><td>8098255466027_2</td><td>Rafta</td></tr><tr><td>24</td><td>8134960522237_1</td><td>Rafta</td></tr></table>	21	5134504975481_3	Rafta	22	8098255466027_1	Rafta	23	8098255466027_2	Rafta	24	8134960522237_1	Rafta	<table><tr><td>21</td><td>5134504975481_3</td><td>Rafta</td></tr><tr><td>22</td><td>8134960522237_1</td><td>Rafta</td></tr><tr><td>23</td><td>8134960522237_2</td><td>Rafta</td></tr></table>	21	5134504975481_3	Rafta	22	8134960522237_1	Rafta	23	8134960522237_2	Rafta			
21	5134504975481_3	Rafta																							
22	8098255466027_1	Rafta																							
23	8098255466027_2	Rafta																							
24	8134960522237_1	Rafta																							
21	5134504975481_3	Rafta																							
22	8134960522237_1	Rafta																							
23	8134960522237_2	Rafta																							

### 7.3. Kitap Güncelle:

```

CHOICE: 3
Enter book ISBN: 9702569648130
OLD INFORMATION: Book name: Huzur ; Book count: 3
Do you want to change name? (1: yes -1: no): 1
Enter new name: HUZUR
Do you want to change book number? (1: yes -1: no): 1
Enter new book count: 10
Book updated successfully

```

Öncesi	Sonrası																																										
<div>(Kitaplar.csv)</div> <table><tr><td>7</td><td>Saatleri Ay</td><td>8.13496E+12</td><td>4</td></tr><tr><td>8</td><td>Huzur</td><td>9702569648130</td><td>3</td></tr><tr><td>9</td><td>Çalışkubu</td><td>4.05411E+12</td><td>6</td></tr></table>	7	Saatleri Ay	8.13496E+12	4	8	Huzur	9702569648130	3	9	Çalışkubu	4.05411E+12	6	<div>(Kitaplar.csv)</div> <table><tr><td>7</td><td>Saatleri Ay</td><td>8.13E+12</td><td>4</td></tr><tr><td>8</td><td>HUZUR</td><td>9.7E+12</td><td>10</td></tr><tr><td>9</td><td>Çalışkubu</td><td>4.05E+12</td><td>6</td></tr></table>	7	Saatleri Ay	8.13E+12	4	8	HUZUR	9.7E+12	10	9	Çalışkubu	4.05E+12	6																		
7	Saatleri Ay	8.13496E+12	4																																								
8	Huzur	9702569648130	3																																								
9	Çalışkubu	4.05411E+12	6																																								
7	Saatleri Ay	8.13E+12	4																																								
8	HUZUR	9.7E+12	10																																								
9	Çalışkubu	4.05E+12	6																																								
<div>(KitapOrnekleri.csv)</div> <table><tr><td>26</td><td>9702569648130_1</td><td>Rafta</td></tr><tr><td>27</td><td>9702569648130_2</td><td>Rafta</td></tr><tr><td>28</td><td>9702569648130_3</td><td>Rafta</td></tr></table>	26	9702569648130_1	Rafta	27	9702569648130_2	Rafta	28	9702569648130_3	Rafta	<table><tr><td>26</td><td>9702569648130_1</td><td>Rafta</td></tr><tr><td>27</td><td>9702569648130_2</td><td>Rafta</td></tr><tr><td>28</td><td>9702569648130_3</td><td>Rafta</td></tr><tr><td>29</td><td>9702569648130_4</td><td>Rafta</td></tr><tr><td>30</td><td>9702569648130_5</td><td>Rafta</td></tr><tr><td>31</td><td>9702569648130_6</td><td>Rafta</td></tr><tr><td>32</td><td>9702569648130_7</td><td>Rafta</td></tr><tr><td>33</td><td>9702569648130_8</td><td>Rafta</td></tr><tr><td>34</td><td>9702569648130_9</td><td>Rafta</td></tr><tr><td>35</td><td>9702569648130_10</td><td>Rafta</td></tr><tr><td>36</td><td>4054110263807_1</td><td>Rafta</td></tr></table>	26	9702569648130_1	Rafta	27	9702569648130_2	Rafta	28	9702569648130_3	Rafta	29	9702569648130_4	Rafta	30	9702569648130_5	Rafta	31	9702569648130_6	Rafta	32	9702569648130_7	Rafta	33	9702569648130_8	Rafta	34	9702569648130_9	Rafta	35	9702569648130_10	Rafta	36	4054110263807_1	Rafta
26	9702569648130_1	Rafta																																									
27	9702569648130_2	Rafta																																									
28	9702569648130_3	Rafta																																									
26	9702569648130_1	Rafta																																									
27	9702569648130_2	Rafta																																									
28	9702569648130_3	Rafta																																									
29	9702569648130_4	Rafta																																									
30	9702569648130_5	Rafta																																									
31	9702569648130_6	Rafta																																									
32	9702569648130_7	Rafta																																									
33	9702569648130_8	Rafta																																									
34	9702569648130_9	Rafta																																									
35	9702569648130_10	Rafta																																									
36	4054110263807_1	Rafta																																									

## 8. Kitap Bilgisi Görüntüleme:

```
CHOICE: 8
Enter ISBN: 7669545841623
Book name: İnce Memed
Book Count: 4
Borrowed by student: Yâzîdîz Tilbe of id: 22014099
The book is written by Author Yâzîr Kemal (of id 11)
```

(Kitaplar.csv)

	A	B	C	D
4	Finallerin Gazabı	1.48E+12	3	
5	İnce Memed	7.67E+12	4	
6	Osman	5.13E+12	20	

(Kitabın ismi ve adet sayısı bulunur)

(KitapYazar.csv)

	A	B
7	7669545841623	11
8	5.13E+12	5

(Yazar id bulur)

(KitapOrnekleri.csv)

15	7669545841623_1	Rafta	
16	7669545841623_2	Rafta	
17	7669545841623_3	22014099	
18	7669545841623_4	Rafta	
19	5134504975481_1	Rafta	

(Varsa hangi öğrenci ödünç almış)

(Yazarlar.csv)

8	9	Osman	Liv
9	11	Yâzîr	Kemal
10	12	Ođuz	Atay
11	13	Rebat Nuri	Gültekin

(Yazar id den yazarın adı ve soyadı bulunur)

## 9. Raftaki Kitapları Listele:

Sonuç: (Not: Tüm liste yazdırıldı sadece Rafta olmayan kitapları yazdırmadığını göstermek için bir kısım seçtim)

```
9702569648130 _ 10
Book Name: Aal²ku■u
4054110263807 _ 1
4054110263807 _ 2
4054110263807 _ 3
4054110263807 _ 6
Book Name: Yaprak D÷k³m³
4001589630538 _ 1
4001589630538 _ 2
```

36	4054110263807_1	Rafta
37	4054110263807_2	Rafta
38	4054110263807_3	Rafta
39	4054110263807_4	20012017
40	4054110263807_5	18011010
41	4054110263807_6	Rafta
42	4001589630538_1	Rafta

(Ođrenciler.csv)

## 10. Zamanında Teslim Edilmeyen Kitapları Listele:

```
CHOICE: 10
Book ISBN: 3219022972921_1; Borrowed Date: 17/02/2023 by student: 23511623
Book ISBN: 1478523691234_2; Borrowed Date: 12/02/2023 by student: 17011015
Book ISBN: 9780140449334_6; Borrowed Date: 08/01/2023 by student: 18011010
Book ISBN: 9361229347876_1; Borrowed Date: 21/12/2022 by student: 23011084
Book ISBN: 4054110263807_4; Borrowed Date: 01/02/2023 by student: 20012017
Book ISBN: 6567502901954_1; Borrowed Date: 25/01/2023 by student: 22516120
Book ISBN: 9780140449335_2; Borrowed Date: 20/01/2023 by student: 23511623
Book ISBN: 7669545841623_4; Borrowed Date: 13/12/2022 by student: 10202512
Book ISBN: 3219022972921_2; Borrowed Date: 19/02/2023 by student: 25012034
Book ISBN: 7669545841623_3; Borrowed Date: 20/12/2022 by student: 22014099
Book ISBN: 1478523691234_3; Borrowed Date: 18/02/2023 by student: 18011001
Book ISBN: 9780140449334_2; Borrowed Date: 18/02/2023 by student: 10202512
```

## 11. Kitap Yazar Eşleştir:

```
Book name: Fizik 2;
ISBN: 1234567891013;
Author name surname: Scott Kirkpatrick;
Author id: 5

Book name: C Programlama;
ISBN: 3214569871012;
Author name surname: Lieven Vandenberghe;
Author id: 6

Book name: Finallerin Gazabi;
ISBN: 1478523691234;
Author name surname: Batuhan Tanriverdi;
Author id: 3
```

(Bütün KitapYazar.csv dosyasındaki bilgiler çıktı olarak görüntülenmiştir)

## 12. Kitabın Yazarını Güncelle:

```
CHOICE: 12
Enter book name: Mesaj
Current Authors
Author: Carl Sagan; id: 16
Add new authors (1), delete authors (2), change current authors (3): 1
How many authors will you add? 3
Enter author id 7
Enter author id 4
Enter author id 6
```

Öncesi				Sonrası			
(Kitaplar.csv)				(KitapYazar.csv)			
11	Soluk Mavi Nokta	9.36123E+12	3	20	5.1345E+12		8
12	Mesaj	2598714271168	2	21	2598714271168		7
13	Zamanın Kısa Tarihi	6.5675E+12	3	22	2.59871E+12		4
14				23	2.59871E+12		6
(Yazarlar.csv)							
14	16	Carl	Sagan				
15							
(KitapYazar.csv)							
13	9.36123E+12		16				
14	2598714271168		16				
15	6.5675E+12		15				
16	3.21902E+12		15				

```

CHOICE: 12
Enter book name: Mesaj
Current Authors
Author: Carl Sagan; id: 16
Author: Fabian Pedregosa; id: 7
Author: David Johnson; id: 4
Author: Lieven Vandenberghe; id: 6
Add new authors (1), delete authors (2), change current authors (3): 3
Current author ID: 16
Enter new author ID: 16
Current author ID: 7
Enter new author ID: 8
Current author ID: 4
Enter new author ID: 4
Current author ID: 6
Enter new author ID: 2
Author information successfully updated for book 'Mesaj'.

```

17	2.6E+12	16
18	6.57E+12	15
19	3.22E+12	15
20	2.6E+12	8
21	2.6E+12	4
22	2.6E+12	2

→

```

CHOICE: 12
Enter book name: Mesaj
Current Authors
Author: Carl Sagan; id: 16
Author: Jorge Nocedal; id: 8
Author: David Johnson; id: 4
Author: Stephen Boyd; id: 2
Add new authors (1), delete authors (2), change current authors (3): 2
Enter the author ID to delete: 4
Author with ID 4 removed from book 'Mesaj'.

```

16	9.36E+12	16
17	2.6E+12	16
18	6.57E+12	15
19	3.22E+12	15
20	2.6E+12	8
21	2.6E+12	2

→

## 13. Yazar Ekle Sil Güncelle:

### 13.1. Yazar Ekle:

```

CHOICE: 13
1. Add Author
2. Delete Author
3. Update Author
CHOICE: 1
Enter name: YunusEmre
Enter surname: Selcuk

```

11	13	Repat Nuri	Gültekin
12	14	Ahmet Har	Tanpýnar
13	15	Omer	faruk
14	16	Carl	Sagan
15			

10	12	Ođuz	Atay
11	13	Repat Nuri	Gültekin
12	14	Ahmet Hamd	Tanpýnar
13	15	Omer	faruk
14	16	Carl	Sagan
15	17	YunusEmre	Selcuk

→

### 13.2. Yazar Sil:

```

CHOICE: 13
1. Add Author
2. Delete Author
3. Update Author
CHOICE: 2
Enter id: 16
Enter name: Carl
Enter surname: Sagan
The author is deleted successfully

```

13	15	Omer	faruk
14	16	Carl	Sagan
15	17	YunusEmre	Selcuk
16			

11	13	Repat Nuri	Gültekin
12	14	Ahmet Har	Tanpýnar
13	15	Omer	faruk
14	17	YunusEmre	Selcuk

→

15	4.00E+12	13
16	9.36E+12	16
17	2.60E+12	16
18	6.57E+12	15

15	4E+12	13
16	9.36E+12	-1
17	2.6E+12	-1
18	6.57E+12	15

### 13.3. Yazar Güncelle:

```
CHOICE: 13
1. Add Author
2. Delete Author
3. Update Author
CHOICE: 3
Enter id of author: 17
Enter new name: Yunus_EMRE
Enter new surname: SELCUK;
```

11	13	Repat Nuri	Gültekin
12	14	Ahmet Hamdi	Tanpýnar
13	15	Omer	faruk
14	17	Yunus_EMRE	SELCUK;
15			

### 14. Yazar Bilgisi Görüntüleme:

```
CHOICE: 14
Enter id 15
Author name surname: Omer faruk
Book: Zaman'n K'sa Tarihi of ISBN: 6567502901954
Book: Her İeyin Teorisi of ISBN: 3219022972921
```

### Projenin Katkıları:

- Dosya İşlemleri Konusunda Derinlik
- Değişik Veri Yapıları ile aynı anda çalışma
- Çift Yönlü Linked List çalışma mantığı
- Gerçek Hayat Senaryoları Üzerinden Problem Çözme...