

database.txt before the operations:

```
≡ database.txt
1  -Sapiens|Yuval Noah Harari|291842|2011|0
2  -Hobbit|J.R.R Tolkien|842952|1937|0
3  -Harry Potter|J.K. Rowling|192452|1997|0
4  -1984|George Orwell|999123|1949|0
5  -Animal Farm|George Orwell|999124|1947|1
6  -Lord Of The Rings|J.R.R Tolkien|882945|1954|1
7  -Silmarillion|J.R.R Tolkien|592985|1977|1
8  -The Apology Of Socrates|Platon|519265|-347|0
9  +Adil Mert|111231|2|1984,Hobbit
10 +Ahmet Sulul|111233|1|The Apology Of Socrates
11 +Elon Musk|123123|0|
12 +Muhammed Merdun|103205|1|Sapiens
13 +Hakan Keser|284392|0|
14 +Mehmet Alp Atay|203845|1|Harry Potter
15
```

OPERATIONS:

```
Running the tests....
```

```
=====
1-Add Book
2-Delete Book
3-Update Book
4-Filter And Sort Books
5-Reverse Books List
6-Search Books
7-Borrow Book
8-Return Book
9-Display Books
+-Display Students
*-Display Borrowed Books
a-Add Student
d-Delete Student
0-Exit
>1
Enter the isbn number of the book: 693852
Enter the title of the book: The Killing Joke
Enter name of the author of the book: Alan Moort
Enter the publication year of the book: 1988
Enter the management method(0:FIFO 1:LIFO): 0
```

```
1-Add Book
2-Delete Book
3-Update Book
4-Filter And Sort Books
5-Reverse Books List
6-Search Books
7-Borrow Book
8-Return Book
9-Display Books
+-Display Students
*-Display Borrowed Books
a-Add Student
d-Delete Student
0-Exit
```

```
>2
```

```
Enter the isbn number of the book that will be deleted: 999124
```

```
Deletion is succesful.
```

```
1-Add Book
2-Delete Book
3-Update Book
4-Filter And Sort Books
5-Reverse Books List
6-Search Books
7-Borrow Book
8-Return Book
9-Display Books
+-Display Students
*-Display Borrowed Books
a-Add Student
d-Delete Student
0-Exit
```

```
>3
```

```
ISBN of the book that will be updated: 842952
```

```
Enter the feature that will be updated(author,title or year): year
```

```
Enter a new value for your feature: 1940
```

```
1-Add Book
2-Delete Book
3-Update Book
4-Filter And Sort Books
5-Reverse Books List
6-Search Books
7-Borrow Book
8-Return Book
9-Display Books
+-Display Students
*-Display Borrowed Books
a-Add Student
d-Delete Student
0-Exit
>4
Enter your filter choice(0:Author 1:Year): 0
Enter the value for your filter: J.R.R Tolkien
Enter your sort choice(0:Title 1:Author 2:Year): 2

Filtered and sorted results:

Title: Hobbit - Author: J.R.R Tolkien - Publication Year: 1940 - ISBN: 842952 - Borrowed
Title: Lord Of The Rings - Author: J.R.R Tolkien - Publication Year: 1954 - ISBN: 882945 - Available
Title: Silmarillion - Author: J.R.R Tolkien - Publication Year: 1977 - ISBN: 592985 - Available
```

```
1-Add Book
2-Delete Book
3-Update Book
4-Filter And Sort Books
5-Reverse Books List
6-Search Books
7-Borrow Book
8-Return Book
9-Display Books
+-Display Students
*-Display Borrowed Books
a-Add Student
d-Delete Student
0-Exit
>5
```

```
1-Add Book
2-Delete Book
3-Update Book
4-Filter And Sort Books
5-Reverse Books List
6-Search Books
7-Borrow Book
8-Return Book
9-Display Books
+-Display Students
*-Display Borrowed Books
a-Add Student
d-Delete Student
0-Exit
```

```
>6
```

```
Choice of search(0:ISBN 1:Author 2:Title): 2
```

```
Value for your criteria: 1984
```

```
Found books that matches your search inputs:
```

```
Title: 1984 - Author: George Orwell - Publication Year: 1949 - ISBN: 999123 - Borrowed
```

```
1-Add Book
2-Delete Book
3-Update Book
4-Filter And Sort Books
5-Reverse Books List
6-Search Books
7-Borrow Book
8-Return Book
9-Display Books
+-Display Students
*-Display Borrowed Books
a-Add Student
d-Delete Student
0-Exit
```

```
>7
```

```
ISBN of the book you want to borrow: 592985
```

```
Enter your student ID: 111231
```

```
1-Add Book
2-Delete Book
3-Update Book
4-Filter And Sort Books
5-Reverse Books List
6-Search Books
7-Borrow Book
8-Return Book
9-Display Books
+-Display Students
*-Display Borrowed Books
a-Add Student
d-Delete Student
0-Exit
>8
ISBN of the book you want to return: 842952
Enter your student ID: 111231
```

```
1-Add Book
2-Delete Book
3-Update Book
4-Filter And Sort Books
5-Reverse Books List
6-Search Books
7-Borrow Book
8-Return Book
9-Display Books
+-Display Students
*-Display Borrowed Books
a-Add Student
d-Delete Student
0-Exit
>9
```

```
Title: The Killing Joke - Author: Alan Moort - Publication Year: 1988 - ISBN: 693852 - Available
Title: The Apology Of Socrates - Author: Platon - Publication Year: -347 - ISBN: 519265 - Borrowed
Title: Silmarillion - Author: J.R.R Tolkien - Publication Year: 1977 - ISBN: 592985 - Borrowed
Title: Lord Of The Rings - Author: J.R.R Tolkien - Publication Year: 1954 - ISBN: 882945 - Available
Title: 1984 - Author: George Orwell - Publication Year: 1949 - ISBN: 999123 - Borrowed
Title: Harry Potter - Author: J.K. Rowling - Publication Year: 1997 - ISBN: 192452 - Borrowed
Title: Hobbit - Author: J.R.R Tolkien - Publication Year: 1940 - ISBN: 842952 - Available
Title: Sapiens - Author: Yuval Noah Harari - Publication Year: 2011 - ISBN: 291842 - Borrowed
```

1-Add Book
2-Delete Book
3-Update Book
4-Filter And Sort Books
5-Reverse Books List
6-Search Books
7-Borrow Book
8-Return Book
9-Display Books
+-Display Students
*-Display Borrowed Books
a-Add Student
d-Delete Student
0-Exit
>+

Student Name: Adil Mert - ID: 111231
Student Name: Ahmet Sulul - ID: 111233
Student Name: Elon Musk - ID: 123123
Student Name: Muhammed Merdun - ID: 103205
Student Name: Hakan Keser - ID: 284392
Student Name: Mehmet Alp Atay - ID: 203845

```
1-Add Book
2-Delete Book
3-Update Book
4-Filter And Sort Books
5-Reverse Books List
6-Search Books
7-Borrow Book
8-Return Book
9-Display Books
+-Display Students
*-Display Borrowed Books
a-Add Student
d-Delete Student
0-Exit
>*
Enter the ID of the student: 103205

Borrowed books: |Sapiens|
```

```
1-Add Book
2-Delete Book
3-Update Book
4-Filter And Sort Books
5-Reverse Books List
6-Search Books
7-Borrow Book
8-Return Book
9-Display Books
+-Display Students
*-Display Borrowed Books
a-Add Student
d-Delete Student
0-Exit
>a
Enter the name of the student: Test Person
Enter the ID of the student: 123456
```

```
1-Add Book
2-Delete Book
3-Update Book
4-Filter And Sort Books
5-Reverse Books List
6-Search Books
7-Borrow Book
8-Return Book
9-Display Books
+-Display Students
*-Display Borrowed Books
a-Add Student
d-Delete Student
0-Exit
>d
```

```
Enter the ID of the student that will be deleted: 103205
```

```
1-Add Book
2-Delete Book
3-Update Book
4-Filter And Sort Books
5-Reverse Books List
6-Search Books
7-Borrow Book
8-Return Book
9-Display Books
+-Display Students
*-Display Borrowed Books
a-Add Student
d-Delete Student
0-Exit
>0
```

```
Terminating the program.
```

```
Completed tests....
```

```
mertergorun@192 220104004048 %
```


database.txt after the operations:

database.txt

```
-The Killing Joke|Alan Moort|693852|1988|1
-The Apology Of Socrates|Platon|519265|-347|0
-Silmarillion|J.R.R Tolkien|592985|1977|0
-Lord Of The Rings|J.R.R Tolkien|882945|1954|1
-1984|George Orwell|999123|1949|0
-Harry Potter|J.K. Rowling|192452|1997|0
-Hobbit|J.R.R Tolkien|842952|1940|1
-Sapiens|Yuval Noah Harari|291842|2011|1
+Adil Mert|111231|2|1984,Silmarillion
+Ahmet Sulul|111233|1|The Apology Of Socrates
+Elon Musk|123123|0|
+Hakan Keser|284392|0|
+Mehmet Alp Atay|203845|1|Harry Potter
+Test Person|123456|0|
```