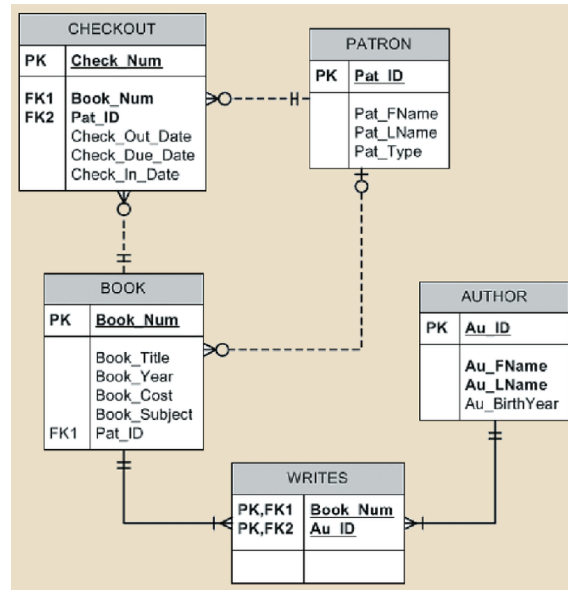


## IN CLASS EXAM 2 REVIEW

Use the Fact database to answer the following. (hint you will need to download it and install it on your UARK EPIC account)



1. Write a query that displays the book title, cost, and year of publications for every book in the system. Sort the results by book title.

Results Messages

	BOOK_TITLE	BOOK_COST	BOOK_YEAR
1	Beginner's Guide to JAVA	59.95	2014
2	Beyond the Database Veil	69.95	2016
3	C# in Middleware Deployment	59.95	2015
4	Capture the Cloud	69.95	2016
5	Cloud-based Mobile Applications	69.95	2015
6	Coding Style for Maintenance	49.95	2017
7	Conceptual Programming	59.95	2015
8	Database in the Cloud	79.95	2014
9	DATABASES in Theory	129.95	2015
10	iOS Programming	79.95	2015
11	Java in Mobile Apps	49.95	2015

Query executed successfully

```
SELECT BOOK_TITLE, BOOK_COST, BOOK_YEAR  
FROM BOOK  
ORDER BY BOOK_TITLE;
```

2. Write a query that displays the first and last name of every patron and last name of every patron?

	PAT_FNAME	PAT_LNAME
1	Vera	Alvarado
2	Holly	Anthony
3	Cedric	Baldwin
4	Cory	Barry
5	Nadine	Blair
6	Erika	Bowen
7	Gerald	Burke
8	Ollie	Cantrell
9	robert	carter
10	Keith	Cooley

```
SELECT PAT_FNAME, PAT_LNAME
FROM PATRON
ORDER BY UPPER(PAT_LNAME), UPPER(PAT_FNAME);
```

3. Write a query that to display the book number, book title, and subject for every book sorted by book number?

	BOOK_NUM	TITLE	Subject of Book
1	5235	Beginner's Guide to JAVA	Programming
2	5236	Database in the Cloud	Cloud
3	5237	Mastering the database environment	Database
4	5238	Conceptual Programming	Programming
5	5239	J++ in Mobile Apps	Programming
6	5240	iOS Programming	Programming
7	5241	JAVA First Steps	Programming
8	5242	C# in Middleware Deployment	Middleware
9	5243	DATABASES in Theory	Database
10	5244	Cloud-based Mobile Applications	Cloud

```
SELECT BOOK_NUM, BOOK_TITLE AS TITLE, BOOK_SUBJECT AS "Subject of Book"
FROM BOOK
ORDER BY BOOK_NUM;
```

4. Write a query to display the checkout number, book number, and checkout date of all books checked out before April 5, 2017 sorted by checkout number.

	CHECK_NUM	BOOK_NUM	CHECK_OUT_DATE
1	91001	5235	2017-03-31
2	91002	5238	2017-03-31
3	91003	5240	2017-03-31
4	91004	5237	2017-03-31
5	91005	5236	2017-03-31

```
SELECT CHECK_NUM, BOOK_NUM, CHECK_OUT_DATE
FROM CHECKOUT
WHERE CHECK_OUT_DATE < '2017-04-05'
ORDER BY CHECK_NUM;
```

- Write a query to display the book number, title, subject, and costs for all books that are on the subjects of "Middleware" or "Cloud" and that costs more than \$70, sort by book number.

	BOOK_NUM	BOOK_TITLE	BOOK_YEAR
1	5247	Shining Through the Cloud: Sun Programming	2016
2	5251	Thoughts on Revitalizing Ruby	2016
3	5253	Virtual Programming for Virtual Environments	2016
4	5254	Coding Style for Maintenance	2017

```
SELECT BOOK_NUM, BOOK_TITLE, BOOK_YEAR
FROM BOOK
WHERE BOOK_YEAR > 2015 AND BOOK_SUBJECT = 'Programming'
ORDER BY BOOK_NUM;
```

- Write a query to display the number of books in the FACT system.

	Number of Books
1	20

```
SELECT Count(BOOK_NUM) AS "Number of Books"
FROM BOOK;
```

- Write a query to display the number of different book subjects in the FACT system.

	Number of Subjects
1	4

```
SELECT Count(DISTINCT BOOK_SUBJECT) AS "Number of Subjects"
FROM BOOK;
```

- Write a query to display the number of books that are available (not checked out)

	Available Books
1	14

```
SELECT Count(BOOK_NUM) AS "Available Books"
FROM BOOK
WHERE PAT_ID IS NULL;
```

9. Write a query to display the author ID, first and last name, book number, and book title of all books in the subject "Cloud." Sort the results by book title and then by author last name. Output should look like the following:

	au_id numeric (7)	au_fname character varying (30)	au_lname character varying (30)	book_num numeric (10)	book_title character varying (120)
1	251	Hugo	Bruer	5246	Capture the Cloud
2	262	Xia	Chiang	5244	Cloud-based Mobile Applica...
3	284	Trina	Tankersly	5244	Cloud-based Mobile Applica...
4	383	Neal	Walsh	5236	Database in the Cloud
5	262	Xia	Chiang	5249	Starlight Applications

```
SELECT AUTHOR.AU_ID, AU_FNAME, AU_LNAME, BOOK.BOOK_NUM,  
BOOK_TITLE  
FROM AUTHOR JOIN WRITES ON AUTHOR.AU_ID = WRITES.AU_ID JOIN BOOK  
ON WRITES.BOOK_NUM = BOOK.BOOK_NUM  
WHERE BOOK_SUBJECT = 'Cloud'  
ORDER BY BOOK_TITLE, AU_LNAME;
```

10. Write a query to display the book number, title, and number of times each book has been checked out. Limit the results to books that have been checked out more than five times. Sort the results in descending order by the number of times checked out and then by title.

	book_num numeric (10)	book_title character varying (120)	Times Checked Out bigint
1	5236	Database in the Cloud	12
2	5235	Beginner's Guide to JAVA	9
3	5240	iOS Programming	7
4	5238	Conceptual Programming	6

```
SELECT BOOK.BOOK_NUM, BOOK_TITLE, AU_LNAME, AU_FNAME,  
PATRON.PAT_ID, PAT_LNAME, PAT_TYPE  
FROM BOOK  
JOIN PATRON ON BOOK.PAT_ID = PATRON.PAT_ID  
JOIN WRITES ON BOOK.BOOK_NUM = WRITES.BOOK_NUM  
JOIN AUTHOR ON WRITES.AU_ID = AUTHOR.AU_ID  
ORDER BY BOOK_TITLE;
```