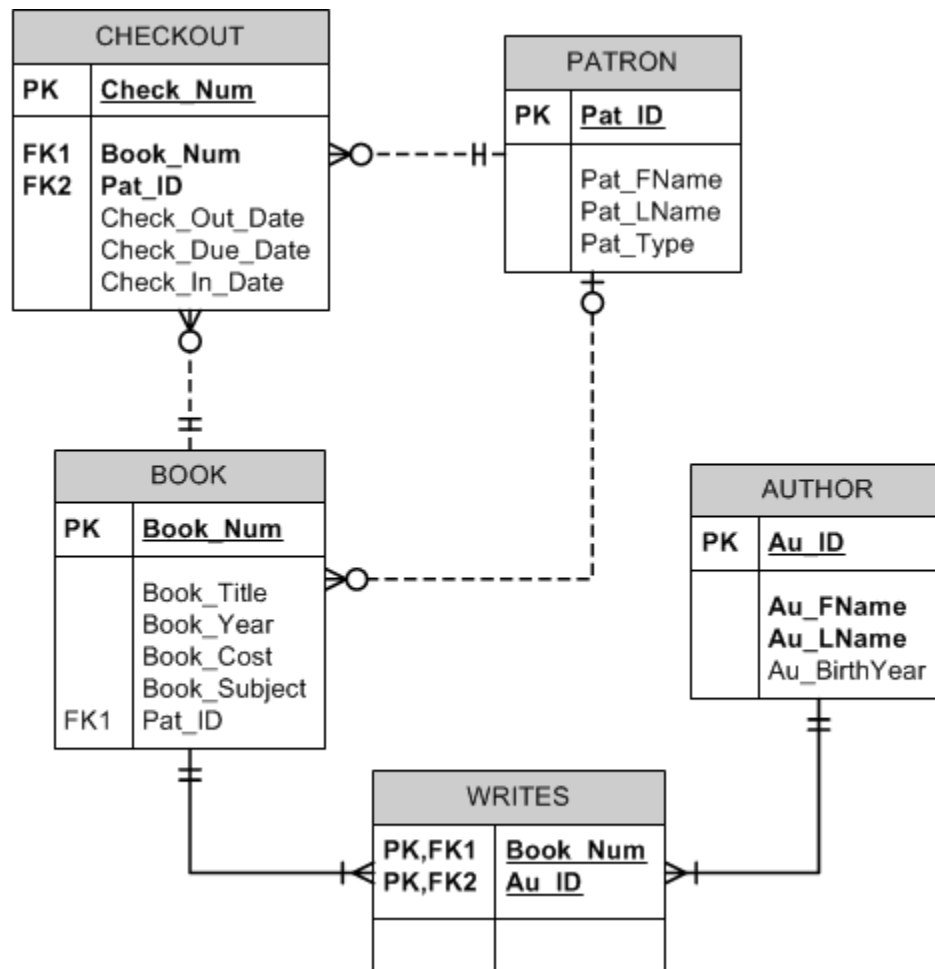

Problem Set 4

Instruction:- Create a **single .sql** file for the problems below and name it as *your First_LastName_PS4.sql*. Upload your .sql file using the Problem Set 4 Upload option in Canvas.

ERD:-



1. Write a query that displays the first and last name of every patron, sorted by last name and then first name. Ensure the sort is case insensitive (50 rows)

PAT_FNAME	PAT_LNAME
Vera	Alvarado
Holly	Anthony
Cedric	Baldwin
Cory	Barry
Nadine	Blair
Erika	Bowen
Gerald	Burke
Ollie	Cantrell
robert	carter
Keith	Cooley

- Write a query to display the checkout number, checkout date, and due date for every book that has been checked out sorted by checkout number

CHECK_NUM	CHECK_OUT_DATE	CHECK_DUE_DATE
91001	3/31/2017	4/14/2017
91002	3/31/2017	4/7/2017
91003	3/31/2017	4/14/2017
91004	3/31/2017	4/14/2017
91005	3/31/2017	4/7/2017
91006	4/5/2017	4/12/2017
91007	4/5/2017	4/12/2017
91008	4/5/2017	4/12/2017
91009	4/5/2017	4/19/2017
91010	4/5/2017	4/19/2017
91011	4/5/2017	4/12/2017

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

BOOK_NUM	TITLE	Subject of Book
5235	Beginner's Guide to JAVA	Programming
5236	Database in the Cloud	Cloud
5237	Mastering the database environment	Database
5238	Conceptual Programming	Programming
5239	J++ in Mobile Apps	Programming
5240	iOS Programming	Programming
5241	JAVA First Steps	Programming
5242	C# in Middleware Deployment	Middleware
5243	DATABASES in Theory	Database
5244	Cloud-based Mobile Applications	Cloud
5245	The Golden Road to Platform independence	Middleware

4. Write a query to display the book number, title, and cost of each book sorted by book number

BOOK_NUM	BOOK_TITLE	Replacement Cost
5235	Beginner's Guide to JAVA	59.95
5236	Database in the Cloud	79.95
5237	Mastering the database environment	89.95
5238	Conceptual Programming	59.95
5239	J++ in Mobile Apps	49.95
5240	iOS Programming	79.95
5241	JAVA First Steps	49.95
5242	C# in Middleware Deployment	59.95
5243	DATABASES in Theory	129.95
5244	Cloud-based Mobile Applications	69.95
5245	The Golden Road to Platform independence	119.95
5246	Capture the Cloud	69.95
5247	Shining Through the Cloud: Sun Programming	109.95
5248	What You Always Wanted to Know About Database, But Were Afraid to Ask	49.95

5. Write a query to display the checkout number, book number, patron ID, checkout date, and due date for every checkout that has ever occurred in the system. Sort the results by checkout date in descending order and then by checkout number in ascending order.

CHECK_NUM	BOOK_NUM	PAT_ID	CHECK_OUT_DATE	CHECK_DUE_DATE
91067	5252	1229	5/24/2017	5/31/2017
91068	5238	1229	5/24/2017	5/31/2017
91066	5242	1228	5/19/2017	5/26/2017
91064	5236	1183	5/17/2017	5/31/2017
91065	5244	1210	5/17/2017	5/24/2017
91060	5235	1209	5/15/2017	5/22/2017
91061	5246	1172	5/15/2017	5/22/2017
91062	5254	1223	5/15/2017	5/22/2017
91063	5243	1223	5/15/2017	5/22/2017
91056	5254	1224	5/10/2017	5/17/2017

6. Write a query to display the book number, title, and replacement cost for all books in the "Database" subject sorted by book number

BOOK_NUM	BOOK_TITLE	BOOK_COST
5237	Mastering the database environment	89.95
5243	DATABASES in Theory	129.95
5248	What You Always Wanted to Know About Database, But Were Afraid to Ask	49.95
5252	Beyond the Database Veil	69.95

7. 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
91001	5235	3/31/2017
91002	5238	3/31/2017
91003	5240	3/31/2017
91004	5237	3/31/2017
91005	5236	3/31/2017

8. Write a query to display the checkout number, book number, patron ID, checkout date, and due date for all checkouts that have not yet been returned. Sort the results by book number

CHECK_NUM	BOOK_NUM	PAT_ID	CHECK_OUT_DATE	CHECK_DUE_DATE
91068	5238	1229	5/24/2017	5/31/2017
91053	5240	1212	5/9/2017	5/16/2017
91066	5242	1228	5/19/2017	5/26/2017
91061	5246	1172	5/15/2017	5/22/2017
91059	5249	1207	5/10/2017	5/17/2017
91067	5252	1229	5/24/2017	5/31/2017

9. Write a query to display the author ID, first name, last name, and year of birth for all authors. Sort the results in descending order by year of birth, and then in ascending order by last name

AU_ID	AU_FNAME	AU_LNAME	AU_BIRTHYEAR
185	Benson	Reeves	1990
603	Julia	Palca	1988
438	Perry	Pearson	1986
581	Manish	Aggerwal	1984
218	Rachel	Beatney	1983
460	Connie	Paulsen	1983
394	Robert	Lake	1982
383	Neal	Walsh	1980
592	Lawrence	Sheel	1976
251	Hugo	Bruer	1972
273	Reba	Durante	1969
284	Trina	Tankersly	1961
262	Xia	Chiang	
559	Rachel	McGill	
229	Carmine	Salvadore	

10. Write a query to display the subject and the number of books in each subject. Sort the results by the number of books in descending order and then by subject name in ascending order

BOOK_SUBJECT	Books In Subject
Programming	9
Cloud	4
Database	4
Middleware	3

Optional Bonus Problems:- Complete these questions for extra credit – questions are worth 3 points each.

11. Write a query to display the author ID and the number of books written by that author. Sort the results in descending order by number of books, then in ascending order by author ID.

AU_ID	Books Written
262	3
460	3
185	2
229	2
251	2
383	2
394	2
559	2
218	1
273	1
284	1
438	1
581	1
592	1
603	1

12. Write a query to display the patron ID, book number, and days kept for each check-out. “Days Kept” is the difference from the date on which the book is returned to the date it was checked out. Sort the results by days kept in descending order, then by patron ID, and then by book number.

PATRON	BOOK	Days Kept
1165	5235	9
1209	5238	5
1160	5240	9
1160	5237	3
1202	5236	8
1203	5235	8
1174	5244	3
1181	5248	1
1170	5242	4
1161	5235	0

13. Write a query to display the book number, title with year, and subject for each book. Sort the results by the book number.

BOOK_NUM	BOOK	BOOK_SUBJECT
5235	Beginner's Guide to JAVA (2014)	Programming
5236	Database in the Cloud (2014)	Cloud
5237	Mastering the database environment (2015)	Database
5238	Conceptual Programming (2015)	Programming
5239	J++ in Mobile Apps (2015)	Programming
5240	iOS Programming (2015)	Programming
5241	JAVA First Steps (2015)	Programming
5242	C# in Middleware Deployment (2015)	Middleware
5243	DATABASES in Theory (2015)	Database
5244	Cloud-based Mobile Applications (2015)	Cloud

14. Write a query to display the author last name, first name, book title, and replacement cost for each book. Sort the results by book number and then author ID.

AU_LNAME	AU_FNAME	BOOK_TITLE	BOOK_COST
Durante	Reba	Beginner's Guide to JAVA	59.95
Walsh	Neal	Database in the Cloud	79.95
Reeves	Benson	Mastering the database environment	89.95
Palca	Julia	Conceptual Programming	59.95
Salvadore	Carmin	J++ in Mobile Apps	49.95
Paulsen	Connie	J++ in Mobile Apps	49.95
Sheel	Lawrence	J++ in Mobile Apps	49.95
Beatney	Rachel	iOS Programming	79.95
Paulsen	Connie	JAVA First Steps	49.95
McGill	Rachel	JAVA First Steps	49.95
Aggerwal	Manish	C# in Middleware Deployment	59.95

15. Write a query to display the book number and the number of times each book has been checked out. Do not include books that have never been checked out. Sort the results by the number of times checked out in descending order and then by book number in descending order

BOOK_NUM	Times Checked Out
5236	12
5235	9
5240	7
5238	6
5237	5
5254	4
5252	4
5249	4
5246	4
5244	4
5242	4
5248	3
5243	2