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Lab 4: SQL
CS6016 - MSD
UofU
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Part 3 - Simple Retrieval Queries

3.1 - SELECT ISBN FROM Titles WHERE Author = <Author>;

3.2 - SELECT Serial FROM Inventory where ISBN = <ISBN> ORDER BY SERIAL DESC;

3.3 - SELECT Serial, ISBN FROM Patrons NATURAL JOIN CheckedOut NATURAL JOIN Inventory WHERE Patrons.Name = <PatronName>;

3.4 - SELECT Phones.Phone, Patrons.Name FROM Phones NATURAL JOIN CheckedOut NATURAL JOIN Patrons JOIN Inventory ON CheckedOut.Serial = Inventory.Serial WHERE Inventory.ISBN = <ISBN>;

Part 4 - Intermediate Retrieval Queries

4.1 - SELECT Titles.Author FROM Inventory Join Titles ON Inventory.ISBN = Titles.ISBN ORDER BY Inventory.Serial ASC LIMIT <n>;

4.2 - SELECT Patrons.Name, Phones.Phone FROM CheckedOut JOIN Patrons ON CheckedOut.CardNum = Patrons.CardNum JOIN Phones ON Patrons.CardNum = Phones.CardNum WHERE CheckedOut.Serial = (SELECT MAX(Serial) FROM CheckedOut);

4.3 - SELECT DISTINCT Patrons.Name, Phones.Phone FROM CheckedOut JOIN Patrons ON CheckedOut.CardNum = Patrons.CardNum JOIN Phones ON Patrons.CardNum = Phones.CardNum;

4.4 - SELECT DISTINCT Titles.Title, Titles.Author FROM Titles LEFT JOIN Inventory ON Titles.ISBN = Inventory.ISBN LEFT JOIN CheckedOut ON Inventory.Serial = CheckedOut.Serial WHERE CheckedOut.CardNum IS NULL;

Part 5 - Chess Queries

5.1 - SELECT Name, pID FROM Players ORDER BY Elo DESC LIMIT 10;

5.2 - SELECT DISTINCT Players.Name, Players.Elo FROM Players JOIN Games ON Players.pID = Games.BlackPlayer;

5.3 - SELECT DISTINCT Players.Name FROM Players JOIN Games ON Players.pID = Games.WhitePlayer WHERE Games.Result = 'W';

5.4 - SELECT DISTINCT Players.Name FROM Players JOIN Games ON Players.pID = Games.WhitePlayer OR Players.pID = Games.BlackPlayer JOIN Events ON Games.eID = Events.eID WHERE Events.Site = 'Budapest HUN' AND Events.Date BETWEEN '2014-01-01' AND '2018-12-31';

5.5 - SELECT DISTINCT Events.Site, Events.Date FROM Events JOIN Games ON Events.eID = Games.eID JOIN Players ON Players.pID = Games.WhitePlayer OR Players.pID = Games.BlackPlayer WHERE Players.Name = 'Kasparov, Garry' AND ((Games.WhitePlayer = Players.pID AND Games.Result = 'W') OR (Games.BlackPlayer = Players.pID AND Games.Result = 'B'));

5.6 - SELECT pID INTO @MagnusCarsenID FROM Players WHERE Name = 'Carlsen, Magnus';
SELECT DISTINCT Players.Name FROM Players WHERE Players.pID IN (SELECT DISTINCT CASE WHEN Games.WhitePlayer = @MagnusCarsenID THEN Games.BlackPlayer WHEN Games.BlackPlayer = @MagnusCarsenID THEN Games.WhitePlayer END AS OppentID From Games WHERE Games.WhitePlayer = @MagnusCarsenID OR Games.BlackPlayer = @MagnusCarsenID);