Lab 5: SQL Continued

Tailang Cao u1480633

- **Find the name of the patron who has checked out the most books.**

```
SELECT Name
FROM Patrons
NATURAL JOIN (
   SELECT CardNum, COUNT(*) AS BookCount
   FROM CheckedOut
   GROUP BY CardNum
   ORDER BY BookCount DESC
   LIMIT 1
) as Most
```

- **Find the Titles of all books that were written by an author whose name starts with 'K'. You can assume author names always start with an uppercase letter**

```
SELECT Title
FROM Titles
WHERE Author LIKE "%K"
```

- **Find the Authors who have written more than one book. Assume that two Authors with the same name are the same Author for this query.**

```
SELECT Author
FROM Titles
GROUP BY Author
HAVING COUNT(*) > 1
```

- **Find the Authors for which the library has more than one book in inventory (this includes multiple copies of the same book). Assume that two Authors with the same name are the same Author for this query.**

```
SELECT Author
FROM Titles
NATURAL JOIN (
   SELECT ISBN
   FROM Inventory
   GROUP BY ISBN
   HAVING COUNT(*) > 1
) AS MultBooks
```

- **The library wants to implement a customer loyalty program based on how many books each patron has checked out. Provide an SQL query that returns the names, number of books they have checked out, and loyalty level of each Patron. The loyalty level should be the string "Platinum" if they have checked out > 2 books, "Gold" if they have 2 books, "Silver" if they have 1 book, and "Bronze" if they have no books. Hint: remember that NULL represents an unknown in SQL (it does not represent 0).**

```
SELECT Name, NumCheckedOut,
CASE
   WHEN NumCheckedOut > 2 THEN 'Platinum'
   WHEN NumCheckedOut = 2 THEN 'Gold'
   WHEN NumCheckedOut = 1 THEN 'Silver'
   WHEN NumCheckedOut = 0 THEN 'Bronze'
END AS LoyaltyLevel
FROM (
   SELECT Name, COUNT(Serial) as NumCheckedOut
   FROM Patrons
   LEFT JOIN CheckedOut ON CheckedOut.CardNum = Patrons.CardNum
   GROUP BY Name
) AS CheckedInfo;
```