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MAT 265
Week 2 - MYSQL Query Assignment

For this Assignment, I am interested in the trends of items that are being returned to the library and checked out from the library. Are there certain categories that have stuck out in recent years?

1. The first query that I wrote extracts the number of items **returned** to the library per year. Below is the SQL code:
    a.

```
SELECT COUNT(cin) AS NumberReturned, YEAR(cin) AS Year
FROM spl_2016.inraw
WHERE YEAR(cin)
GROUP BY YEAR(cin
ORDER BY Year ASC;
```

2. Following, I wrote a similar SQL query to extract the number of items **checked out** per year since 2006:
    a.

```
SELECT COUNT(cout) AS NumberCheckedOut, YEAR(cout) AS Year
FROM spl_2016.outraw
WHERE YEAR(cout)
GROUP BY YEAR(cout)
ORDER BY Year ASC;
```

3. Next, I wanted to know how many items per Dewey Class were checked out and returned per year. Along with this, I also queried a column for Non-Dewey items checked out and returned per year. The two queries are below:
    a.

```
// how many of each dewey class were checked out per year
SELECT COUNT(cout) as NumberCheckedOut, YEAR(cout) as Year,
CASE
        WHEN deweyClass >= 000 AND deweyClass < 100 THEN 'Generalities'
        WHEN deweyClass >= 100 AND deweyClass < 200 THEN 'Philosophy & Psychology'
        WHEN deweyClass >= 200 AND deweyClass < 300 THEN 'Religion'
        WHEN deweyClass >= 300 AND deweyClass < 400 THEN 'Social Science'
        WHEN deweyClass >= 400 AND deweyClass < 500 THEN 'Language'
        WHEN deweyClass >= 500 AND deweyClass < 600 THEN 'Natural Science &
        Mathematics'
        WHEN deweyClass >= 600 AND deweyClass < 700 THEN 'Technology & Applied
```

```
        Sciences'
        WHEN deweyClass >= 700 AND deweyClass < 800 THEN 'Arts'
        WHEN deweyClass >= 800 AND deweyClass < 900 THEN 'Literature'
        WHEN deweyClass >= 900 AND deweyClass < 1000 THEN 'Geography & History'
        ELSE 'Non-Dewey'
END AS dewey_categorization
FROM spl_2016.outraw
WHERE year(cout) >= 2018
GROUP BY dewey_categorization, YEAR(cout)
ORDER BY dewey_categorization, YEAR(cout) ASC;
```

b.

```
// how many of each dewey class were returned per year
SELECT COUNT(cin) as NumberReturned, YEAR(cin) as Year,
CASE
        WHEN deweyClass >= 000 AND deweyClass < 100 THEN 'Generalities'
        WHEN deweyClass >= 100 AND deweyClass < 200 THEN 'Philosophy & Psychology'
        WHEN deweyClass >= 200 AND deweyClass < 300 THEN 'Religion'
        WHEN deweyClass >= 300 AND deweyClass < 400 THEN 'Social Science'
        WHEN deweyClass >= 400 AND deweyClass < 500 THEN 'Language'
        WHEN deweyClass >= 500 AND deweyClass < 600 THEN 'Natural Science &
        Mathematics'
        WHEN deweyClass >= 600 AND deweyClass < 700 THEN 'Technology & Applied
         Sciences'
        WHEN deweyClass >= 700 AND deweyClass < 800 THEN 'Arts'
        WHEN deweyClass >= 800 AND deweyClass < 900 THEN 'Literature'
        WHEN deweyClass >= 900 AND deweyClass < 1000 THEN 'Geography & History'
        ELSE 'Non-Dewey'
END AS dewey_categorization
FROM spl_2016.inraw
WHERE year(cin) >= 2018
GROUP BY dewey_categorization, YEAR(cin)
ORDER BY dewey_categorization, YEAR(cin)ASC;
```

4. Next, I was interested in how the trends in check outs have changed in certain categories of items since 2006. The categories that I am interested in are mystery books, romance books, and technology. Below is the SQL code for the query to obtain the data: (‘Null’ means that the item is not in one of the three listed categories above)

a.

```
SELECT YEAR(cout), COUNT(cout),
CASE
```

```
WHEN title LIKE '%crime%' OR title LIKE '%murder%' OR title LIKE '%mystery%'
        OR title LIKE '%kill%' OR title LIKE '%thrill%' OR title LIKE '%secret%'
THEN 'Mystery'
WHEN title LIKE '%love%' OR title LIKE '%kiss%' OR title LIKE '%dream%' OR title LIKE
'%romance%'
THEN 'Romance'
WHEN deweyClass >= 600 AND deweyClass < 700 THEN 'Technology'
ELSE 'Null'
END AS item_cat
FROM spl_2016.outraw
GROUP BY item_cat, YEAR(cout)
ORDER BY item_cat, YEAR(cout)
```