CSC343 Worksheet 6 Solution

June 21, 2020

1. **Exercise 8.1.1:**

a)
```
1    CREATE VIEW RichExec AS
2        SELECT * FROM MovieExec
3        WHERE netWorth >= 10000000;
4
```

Notes:

- Virtual Views
  - **Syntax:** CREATE VIEW < view-name > AS < view-definition >
  - Contrasts to database that exists in physical storage
  - Exists in RAM
  - Is created using query
  - can be used like a relation

    Notes:

    ```
    1        CREATE VIEW ParamountMovies AS
    2            SELECT title, year
    3            FROM Movies
    4            WHERE studioName = 'Paramount';
    5
    ```

b)
```
1    CREATE VIEW StudioPres AS
2        SELECT * FROM Movies
3        INNER JOIN Studio ON cert# = presC#;
4
```

c)
```
1    CREATE VIEW ExecutiveStar AS
2        SELECT * FROM MovieExec
3        NATURAL JOIN MovieStar;
4
```

2. **Exericse 8.1.2:**

a)
```
SELECT name, gender FROM ExecutiveStar;
```

b)
```
SELECT name FROM RichExec WHERE netWorth > 10000000;
```

c)
```
SELECT name FROM StudioPres
NATURAL JOIN ExecutiveStar
WHERE netWorth > 50000000
```

3. **Exericse 8.1.3:**

RichExec is updatable.

Notes:

- Updatable View Conditions
    - The WHERE cluase in CREATE VIEW must not be a subquery
    - The FROM clause has only one occurence of R
    - The SELECT clause must include enough attributes
    - NOT NULL attributes must have default values
        * A solution to this is by including the attribute without default value in CREATE VIEW

    Example:

```
Movies(title, year, length, genre, studioName, producerC#)
Suppose studioName is NOT NULL but has no default value.
Then, a fix is:

CREATE VIEW Paramount AS
    SELECT studioName, title, year
    FROM Movies
    WHERE studioName = 'Paramount';
```