

1. Create, alter, drop tables

a) Outcome: Imported the csv file and renamed the table to *RossFiles*. Created 3 tables for all episodes based on night, bushes, and beach themes. Dropped the *Bushes* table then added it back.

b) Screenshot:

```
1 • CREATE SCHEMA BobRoss;
2 • USE BobRoss;
3
4 #Create, alter, drop tables
5
6 • ALTER TABLE `elements-by-episode`
7   RENAME TO RossFiles;
8 • SELECT * FROM RossFiles;
9
10 • CREATE TABLE Night AS (SELECT episode, title, night FROM RossFiles WHERE night = 1);
11 • CREATE TABLE Bushes AS (SELECT episode, title, bushes FROM RossFiles WHERE bushes = 1);
12 • CREATE TABLE Beach AS (SELECT episode, title, beach FROM RossFiles WHERE beach = 1);
13
14 • SELECT * FROM Beach;
15 • SELECT * FROM Bushes;
16 • SELECT * FROM Night;
```

episode	title	night
S01E06	"WINTER MOON"	1
S03E02	"BLUE MOON"	1
S03E08	"NIGHT LIGHT"	1
S08E13	"NORTHERN LIGHTS"	1
S12E05	"BLACK SEASCAPE"	1
S13E12	"OVAL ESSENCE"	1
S14E03	"MOUNTAIN MOONLIGHT OVAL"	1
S19E12	"EVENING'S PEACE"	1
S26E13	"EVENING AT THE FALLS"	1
S28E13	"HOME BEFORE NIGHTFALL"	1
S29E12	"AURORA'S DANCE"	1

Database Explorer:

- BobRoss
 - Tables
 - Beach
 - Night
 - RossFiles
 - Views
 - Stored Procedures
 - Functions
- HR
- SalesOrders
- sys

```
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4 #Create, alter, drop tables
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6 • ALTER TABLE `elements-by-episode`
7   RENAME TO RossFiles;
8 • SELECT * FROM RossFiles;
9
10 • CREATE TABLE Night AS (SELECT episode, title, night FROM RossFiles WHERE night = 1);
11 • CREATE TABLE Bushes AS (SELECT episode, title, bushes FROM RossFiles WHERE bushes = 1);
12 • CREATE TABLE Beach AS (SELECT episode, title, beach FROM RossFiles WHERE beach = 1);
13
14 • SELECT * FROM Beach;
15 • SELECT * FROM Bushes;
16 • SELECT * FROM Night;
17
18 • DROP TABLE Bushes;
```

Beach 6 | Bushes 7 | Night 8

2. SET operations, Subqueries, Order of op queries

- a) Outcome: Created a simple *UNION* between the *Beach* and *Night* tables. The *UNION* joined the two separate tables into one and listed the *episode_type* (distinguishes whether the episode was beach and night themed), *episode*, and *title*.

In a more elaborate version of the *UNION*, I added a subquery for the *Beach* table to select all episodes whose titles included the word "Storm". I also added a second *UNION* to include the *Bushes* table along with a subquery where the title included the word "Mountain". I ordered this new list by the title of the episodes in a descending order and limited the output to 20 rows.

- b) Screenshot:

The screenshot displays two SQL queries and their corresponding result sets in a database interface.

Query 1: Simple UNION

```
20 #SET operations
21 • SELECT 'Beach' AS episode_type, episode, title FROM Beach
22 UNION
23 SELECT 'Night', episode, title FROM Night;
```

Result Grid 1:

episode_type	episode	title
Beach	S01E09	"SEASCAPE"
Beach	S04E05	"EVENING SEASCAPE"
Beach	S09E02	"SURF'S UP"
Beach	S09E06	"SECLUDED BEACHES"
Beach	S09E12	"MOUNTAIN-BY-THE-SEA"
Beach	S10E10	"OCEAN SUNSET"
Beach	S11E10	"SUNSET OVER THE OCEAN"
Beach	S12E05	"BLACK SEASCAPE"
Beach	S12E09	"TROPICAL SEASCAPE"
Beach	S14E07	"WINDY WAVES"
Beach	S15E06	"WAVES OF WISDOM"
Beach	S16E08	"HIGH TIDE"
Beach	S17E04	"STORMY SEASCAPE"
Beach	S18E09	"SEASCAPE FANTASY"
Beach	S19E09	"EBB TIDE"
Beach	S20E06	"CLIFFSIDE"
Beach	S21E08	"BY THE SEA"
Beach	S21E13	"FLORIDA'S GULF COAST"
Beach	S22E11	"PASTEL SEASCAPE"
Beach	S23E12	"CRIMSON TIDES"
Beach	S24E10	"ROWBOAT RACER"
Beach	S26E11	"STORM'S A COMIN'"
Beach	S27E09	"ISLAND PARADISE"
Beach	S28E11	"TRANQUIL SEASCAPE"
Beach	S29E09	"STORM ON THE HORIZON"
Beach	S30E10	"SEASIDE HAVEN"
Beach	S31E10	"BALMY BEACHES"
Night	S01E06	"WINTER MOON"
Night	S03E02	"BLUE MOON"
Night	S03E08	"NIGHT LIGHT"
Night	S08E13	"NORTHERN LIGHTS"
Night	S12E05	"BLACK SEASCAPE"
Night	S13E12	"OVAL ESSENCE"
Night	S14F03	"MOUNTAIN BY THE SEA"

Query 2: Complex UNION with Subqueries

```
21 #SET operations, Subqueries, Order of op queries
22
23 • SELECT DISTINCT 'Beach' AS episode_type, episode, title FROM Beach WHERE title IN (
24     SELECT title FROM Beach WHERE title LIKE '%Storm%')
25 UNION
26 SELECT 'Night', episode, title FROM Night
27 UNION
28 SELECT 'Bushes', episode, title FROM Bushes WHERE title IN (
29     SELECT title FROM Bushes WHERE title LIKE '%Mountain%')
30 ORDER BY title DESC LIMIT 20;
```

Result Grid 2:

episode_type	episode	title
Night	S01E06	"WINTER MOON"
Bushes	S25E05	"SUMMER IN THE MOUNTAIN"
Beach	S17E04	"STORMY SEASCAPE"
Beach	S26E11	"STORM'S A COMIN'"
Beach	S29E09	"STORM ON THE HORIZON"
Bushes	S12E06	"STEEP MOUNTAINS"
Bushes	S12E11	"SOFT MOUNTAIN GLOW"
Bushes	S12E07	"QUIET MOUNTAIN RIVER"
Night	S13E12	"OVAL ESSENCE"
Night	S08E13	"NORTHERN LIGHTS"
Night	S03E08	"NIGHT LIGHT"
Bushes	S09E12	"MOUNTAIN-BY-THE-SEA"
Bushes	S05E01	"MOUNTAIN WATERFALL"
Bushes	S13E10	"MOUNTAIN SUMMIT"
Bushes	S07E08	"MOUNTAIN SPLENDOR"
Bushes	S28E12	"MOUNTAIN SERENITY"
Bushes	S14E05	"MOUNTAIN RIVER"
Bushes	S03E01	"MOUNTAIN RETREAT"
Bushes	S12E02	"MOUNTAIN REFLECTIONS"
Bushes	S09E09	"MOUNTAIN PATH"

3. Associations (foreign keys)

a) Outcome: I got an error on this one so I'm not sure what the excuted table is suppose to look like.

b) Screenshot:

```
#Associations (foreign keys)
```

```
ALTER TABLE RossFiles ADD UNIQUE(EPISODE(80));
```

```
#Line 34 executes fine, but 37 & 39 will not. I was trying to add a key length based on the error below.
```

```
#"Error Code: 1170. BLOB/TEXT column 'EPISODE' used in key specification without a key length"
```

```
ALTER TABLE RossFiles ADD PRIMARY KEY RossFiles(EPISODE);
```

```
ALTER TABLE RossFiles ADD FOREIGN KEY (episode) REFERENCES RossFiles(episode);
```

```
# ADD CONSTRAINT BR_EpID          VARCHAR(30)
```

4. Joins & multiple table joins

a) Outcome: Not sure if my outcome is correct here, but each of the JOINS received a green check mark when I ran the lines. However, just using JOIN alone the got an empty table, so I may be missing something.

b) Screenshot:

```
44 #Joins & multiple table joins
```

```
45 #I can only see an output when I use Left or Right Join, but only from 1 of the tables. Using Join alone does execute correctly, but the table is empty.
```

```
46
```

```
47 • SELECT Bushes.episode, Bushes.title, Night.episode, Night.title FROM Bushes JOIN Night
```

```
48 ON Bushes.episode = Night.episode AND Bushes.title = Night.title;
```

```
49
```

```
50 • SELECT * FROM Night RIGHT JOIN Bushes ON Bushes.episode = Night.episode;
```

```
51 • SELECT * FROM Bushes RIGHT JOIN Night ON Bushes.episode = Night.episode;
```

100% 73:51

Result Grid Filter Rows: Search Export:

episode	title	bushes	episode	title	night
S01E06	"WINTER MOON"	1			
S03E02	"BLUE MOON"	1			
S03E08	"NIGHT LIGHT"	1			
S08E13	"NORTHERN LIGHTS"	1			
S12E05	"BLACK SEASCAPE"	1			
S13E12	"OVAL ESSENCE"	1			
S14E03	"MOUNTAIN MOONLIGHT OVAL"	1			
S19E12	"EVENING'S PEACE"	1			
S26E13	"EVENING AT THE FALLS"	1			
S28E13	"HOME BEFORE NIGHTFALL"	1			
S29E12	"AURORA'S DANCE"	1			