

# SQL CASE STUDY













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Q1) Retrieve the names of the characters.?

```
SELECT name  
From characters;
```

| Data Output   |  | Messages  | Notifications   |
|---|--|---|---|
|       |  |  |   |
|   | <b>name</b><br>character varying (255)  |   |   |
| 1   | Eleven   |   |   |
| 2   | Mike Wheeler   |   |   |
| 3   | Dustin Henderson   |   |   |
| 4   | Lucas Sinclair   |   |   |
| 5   | Will Byers   |   |   |
| 6   | Joyce Byers  |   |   |
| 7   | Jim Hopper   |   |   |
| 8   | Steve Harrington   |   |   |
| 9   | Jonathan Byers   |   |   |

Q2) Find characters with age greater than 18?

```
SELECT *  
FROM Characters  
WHERE age >18;
```

Data Output Messages Notifications



|   | character_id<br>[PK] integer | name<br>character varying (255) | age<br>integer | occupation<br>character varying (255) | hometown<br>character varying (255) | introduction<br>text                              |
|---|------------------------------|---------------------------------|----------------|---------------------------------------|-------------------------------------|---|
| 1 | 6                            | Joyce Byers                     | 42             | Retail Clerk                          | Hawkins                             | Mother of Will and Jonathan.                      |
| 2 | 7                            | Jim Hopper                      | 45             | Chief of Police                       | Hawkins                             | Protector of the town and Eleven.                 |
| 3 | 9                            | Jonathan Byers                  | 19             | Photographer                          | Hawkins                             | Will's older brother and a close friend of Nancy. |

Q3) Find events in season 2. ?

```
SELECT *  
FROM Events  
WHERE season = 2;
```

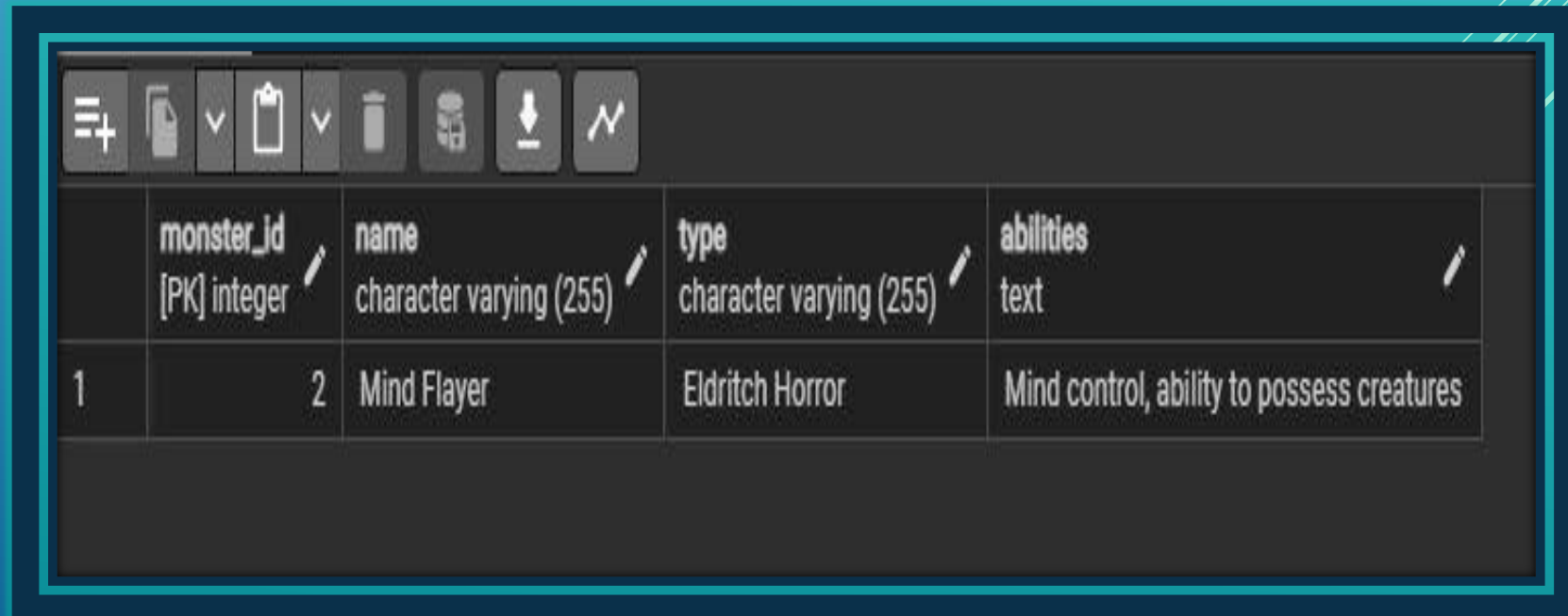
Data Output Messages Notifications



|   | event_id<br>[PK] integer | season<br>integer | episode<br>integer | event_name<br>character varying (255) | description<br>text  |
|---|--------------------------|-------------------|--------------------|---------------------------------------|--|
| 1 | 3                        | 2                 | 5                  | Demogorgon Attack on School           | A terrifying encounter with the Demogorgon at Hawkins High Scho... |
| 2 | 4                        | 2                 | 9                  | The Mind Flayer                       | The emergence of the Mind Flayer in Season 2.                      |
| 3 | 7                        | 2                 | 2                  | The Upside Down                       | Exploration of the alternate dimension known as the Upside Down.   |

Q4) Get details of the 'mind flayer' monster?

```
SELECT *  
FROM Monsters  
WHERE "name" = 'Mind Flayer';
```



|   | monster_id<br>[PK] integer | name<br>character varying (255) | type<br>character varying (255) | abilities<br>text                          |
|---|----------------------------|---------------------------------|---------------------------------|--|
| 1 | 2                          | Mind Flayer                     | Eldritch Horror                 | Mind control, ability to possess creatures |

## Q5) Retrieve characters and their associated events.?












```
SELECT c.name, e.event_name
FROM Characters c
JOIN Relationships r ON c.character_id = r.character1_id OR c.character_id = r.character2_id
JOIN Events e ON r.character1_id = e.event_id OR r.character2_id=e.event_id;
```

| Data Output |  | Messages                                       | Notifications |
|-------------|--|--|---------------|
|             |  |  |               |
|             | <b>name</b><br>character varying (255) 🔒 | <b>event_name</b><br>character varying (255) 🔒 |               |
| 1           | Eleven                                   | Disappearance of Will Byers                    |               |
| 2           | Mike Wheeler                             | Disappearance of Will Byers                    |               |
| 3           | Eleven                                   | Disappearance of Will Byers                    |               |
| 4           | Jim Hopper                               | Disappearance of Will Byers                    |               |
| 5           | Eleven                                   | Discovery of Eleven                            |               |
| 6           | Mike Wheeler                             | Discovery of Eleven                            |               |
| 7           | Mike Wheeler                             | Discovery of Eleven                            |               |
| 8           | Dustin Henderson                         | Discovery of Eleven                            |               |
| 9           | Mike Wheeler                             | Demogorgon Attack on School                    |               |



Q6) Calculate the total number of characters from each hometown?

```
SELECT hometown ,COUNT(character_id)AS Total_Characters
FROM
Characters
GROUP BY hometown;
```

| Data Output   |  | Messages  | Notifications   |
|---|--|---|---|
|  |  |                                      |  |
|  |  |                                      |  |
|  |  |                                      |  |
|   | <b>hometown</b><br>character varying (255)  | <b>total_characters</b><br>bigint  |   |
| 1   | Hawkins  | 10  |   |



Q7) Retrieve characters who were involved in events in season 1 or season 2.?

```
SELECT c.name,e.season
FROM
Characters c
JOIN Relationships r ON c.character_id = r.character1_id OR c.character_id = r.character2_id
JOIN Events e ON r.character1_id = e.event_id OR r.character2_id=e.event_id
WHERE season IN(1,2);
```

Data Output

Messages

Notifications

|   | <div>name</div> <div>character varying (255)</div> | <div>season</div> <div>integer</div> |
|---|--|--------------------------------------|
| 1 | Eleven   | 1                                    |
| 2 | Eleven   | 1                                    |
| 3 | Eleven   | 1                                    |
| 4 | Eleven   | 2                                    |
| 5 | Mike Wheeler                                       | 1                                    |
| 6 | Mike Wheeler                                       | 1                                    |
| 7 | Mike Wheeler                                       | 1                                    |
| 8 | Mike Wheeler                                       | 2                                    |
| 9 | Dustin Henderson                                   | 1                                    |

## Q8) Find the top 3 oldest characters?

```
SELECT *
FROM
Characters
ORDER BY Age
DESC LIMIT 3;

--OR --

SELECT Ranked_rows.*
FROM
    (SELECT characters.*,
        rank()OVER( order by age DESC) AS rnk
        From Characters)
    AS Ranked_Rows
WHERE rnk<=3;
```

| Data Output Messages Notifications |                              |                                 |                |                                       |                                     |   |               |
|------------------------------------|------------------------------|---------------------------------|----------------|---------------------------------------|-------------------------------------|---|---------------|
|                                    | character_id<br>[PK] integer | name<br>character varying (255) | age<br>integer | occupation<br>character varying (255) | hometown<br>character varying (255) | introduction<br>text                              | rnk<br>bigint |
| 1                                  | 7                            | Jim Hopper                      | 45             | Chief of Police                       | Hawkins                             | Protector of the town and Eleven.                 | 1             |
| 2                                  | 6                            | Joyce Byers                     | 42             | Retail Clerk                          | Hawkins                             | Mother of Will and Jonathan.                      | 2             |
| 3                                  | 9                            | Jonathan Byers                  | 19             | Photographer                          | Hawkins                             | Will's older brother and a close friend of Nancy. | 3             |

Q9) Find the average age of characters in hawkins?

```
SELECT ROUND(AVG(age),2) AS Average_Age
FROM
Characters
WHERE Hometown = 'Hawkins';
```

Data Output Messages Notifications



|   | average_age<br>numeric |  |
|---|------------------------|--|
| 1 | 22.00                  |  |



Q10) Rank characters by age in descending order.?

```
SELECT Ranked_rows.*
FROM
    (SELECT name,age,
        rank()OVER (ORDER BY Age DESC) AS rnk
        FROM Characters)
AS Ranked_rows;

--OR--

SELECT name,age
FROM Characters
ORDER BY Age
DESC;
```

| Data Output |                         |         |        |  | Messages | Notifications |
|-------------|-------------------------|---------|--------|--|----------|---------------|
|             | name                    | age     | rnk    |  |          |               |
|             | character varying (255) | integer | bigint |  |          |               |
| 1           | Jim Hopper              | 45      | 1      |  |          |               |
| 2           | Joyce Byers             | 42      | 2      |  |          |               |
| 3           | Jonathan Byers          | 19      | 3      |  |          |               |
| 4           | Steve Harrington        | 18      | 4      |  |          |               |
| 5           | Nancy Wheeler           | 17      | 5      |  |          |               |
| 6           | Will Byers              | 16      | 6      |  |          |               |
| 7           | Lucas Sinclair          | 16      | 6      |  |          |               |
| 8           | Dustin Henderson        | 16      | 6      |  |          |               |
| 9           | Mike Wheeler            | 16      | 6      |  |          |               |

# Thank you

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