

## BrightLight Tutorials

### Data Analytics

#### Exercise 2.1: Advanced SQL (NULL FUNCTIONS & LIKE OPERATOR)

##### Database: customers\_db

Assume you have a table called **customers** with the following structure:

customer_id	first_name	last_name	email	phone	city	referral_code
1	Sarah	Daniels	sarahd@email.com	0821112233	Johannesburg	REF1001
2	Mike		NULL	0825551122	Durban	NULL
3	Lerato	Mokoena	lerato@email.com	NULL	Cape Town	REF1002
4	Tumi	Kgosi	NULL	NULL	Pretoria	
5	John	Smith	john.s@email.com	0734567890	Johannesburg	REF1003
6	Mary	Mokoena	marym@email.com	0712233445	Cape Town	NULL
7	Lebo	Moeketsi	NULL	NULL	Bloemfontein	REF1001

#### Questions

1. **Check for missing emails**

Write a query to select all customers who do not have an email address.

Columns to include: customer\_id, first\_name, last\_name, email

2. **Check for customers with phone numbers**

Write a query to find all customers who have a phone number.

Columns to include: customer\_id, first\_name, phone

3. **Replace NULL referral codes with 'NO\_CODE'**

Write a query to show the referral code for each customer, replacing any NULL or blank values with 'NO\_CODE'.

Columns to include: customer\_id, first\_name, IFNULL(referral\_code, 'NO\_CODE') AS referral\_status

4. **Find customers from Johannesburg or Cape Town**

Write a query to return customers who live in Johannesburg or Cape Town.

Columns to include: customer\_id, first\_name, city

5. **Find customers whose first name starts with 'L'**

Write a query to return customers whose first\_name starts with the letter 'L'.

Columns to include: customer\_id, first\_name, city

6. **Find customers whose last name ends with 'a'**

Write a query to return customers whose last\_name ends with the letter 'a'.

Columns to include: customer\_id, last\_name

7. **Detect incomplete customer records**

Write a query to find all customers who have either no phone number or no email address.

Columns to include: customer\_id, first\_name, email, phone