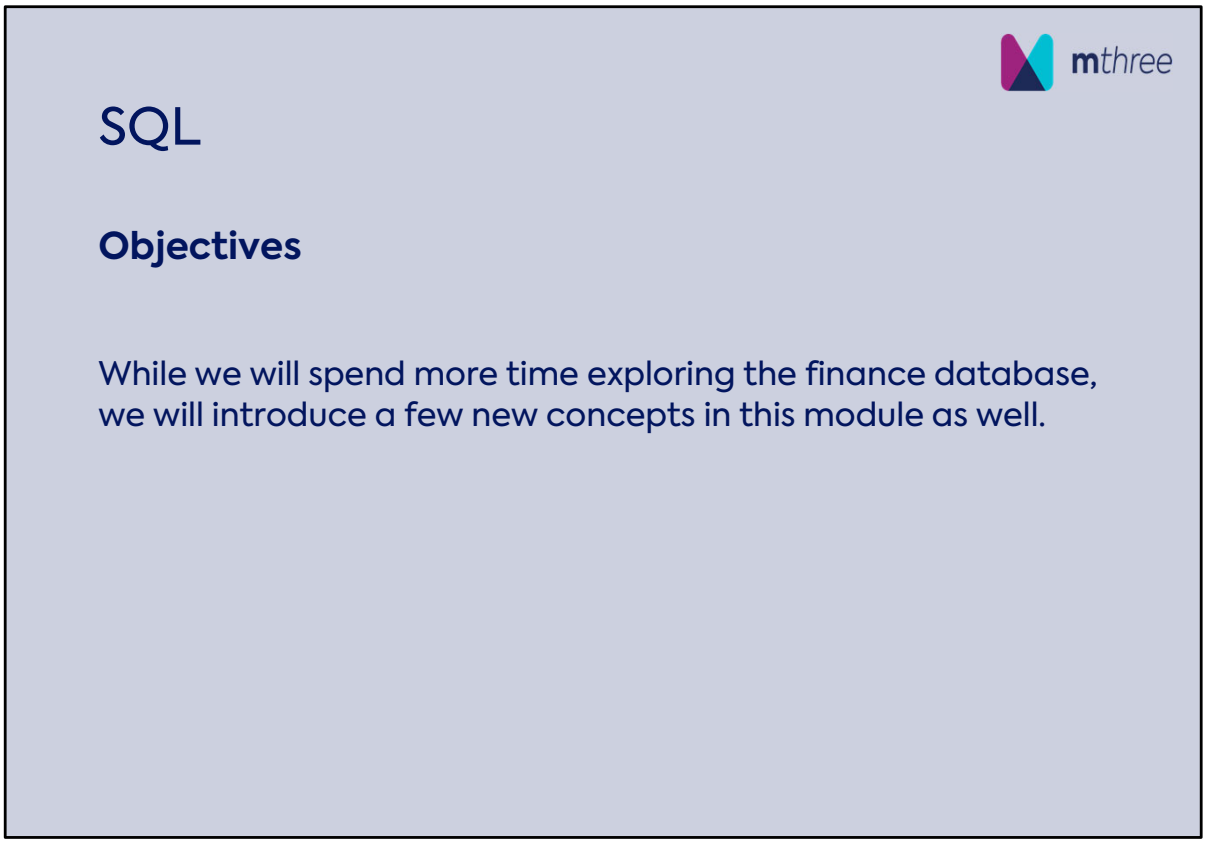
Mthree Alumni Training

Module 2
SQL and Finance

- Additional useful SQL functions



Trainer Notes
We will review the new methods here then go through demos and exercises to practice

The regexp_like command

- The regexp_like() command is treated like a function in Oracle Database and an operator in SQL standard. It allows you to search databases using regular expressions:

```
REGEXP_LIKE(source_string, search_pattern [, match_parameter]);
```

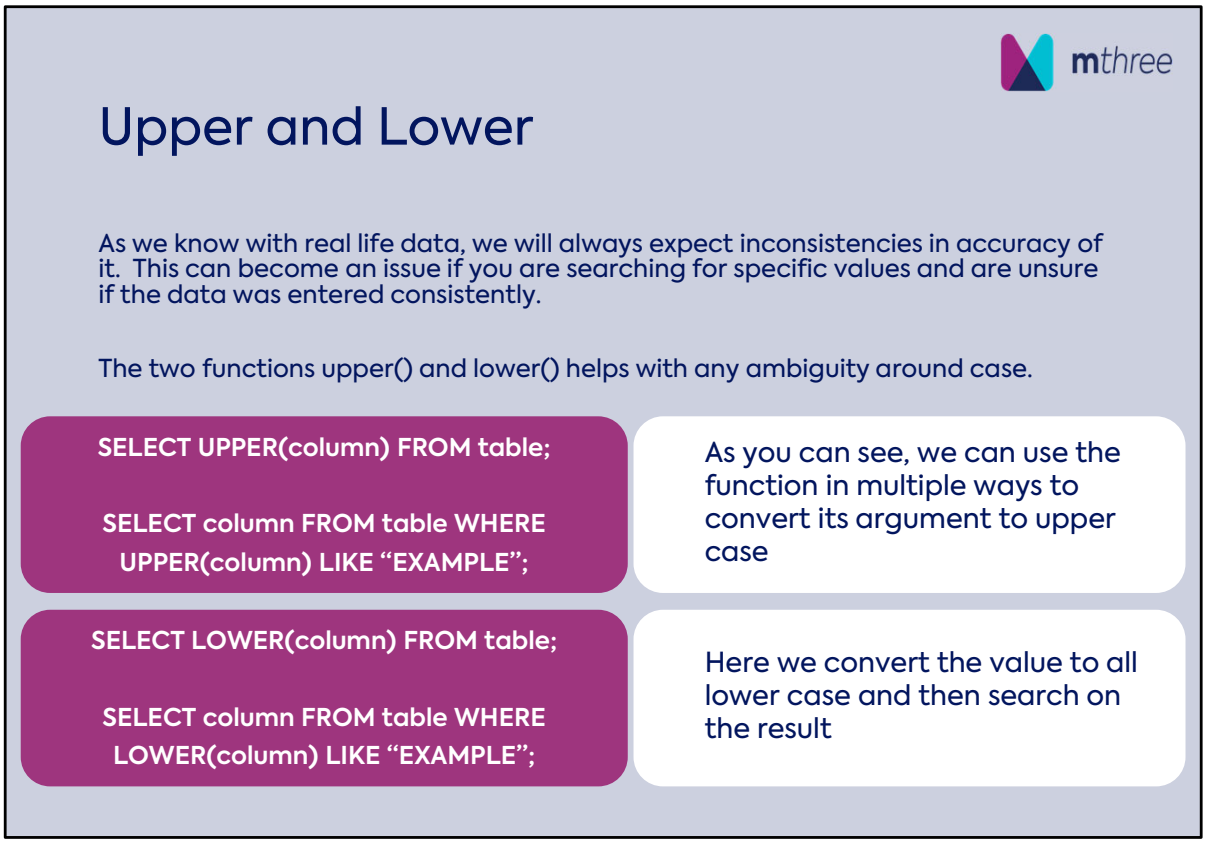
- Let's look at an example of searching for all values that start with s (case insensitive) in the column:

```
SELECT column FROM table WHERE REGEXP_LIKE (column, '^s', 'i' );
```

- As with other regular expressions, you can use other special characters such as $ or |

Trainer/Trainee Notes

this is a useful search tool within the database if you are wanting to find a subset of records.



Trainer/Trainee Notes

This function is often used in conjunction with other functions – and is a helpful way to ensure you catch all instances of the value you are trying to find. Obviously you would want to use a regular expression search if you are concerned about spelling being incorrect in the data.

INSTR function

The INSTR() function is another useful SQL tool for searching for strings within strings.

INSTR(string1, string2)

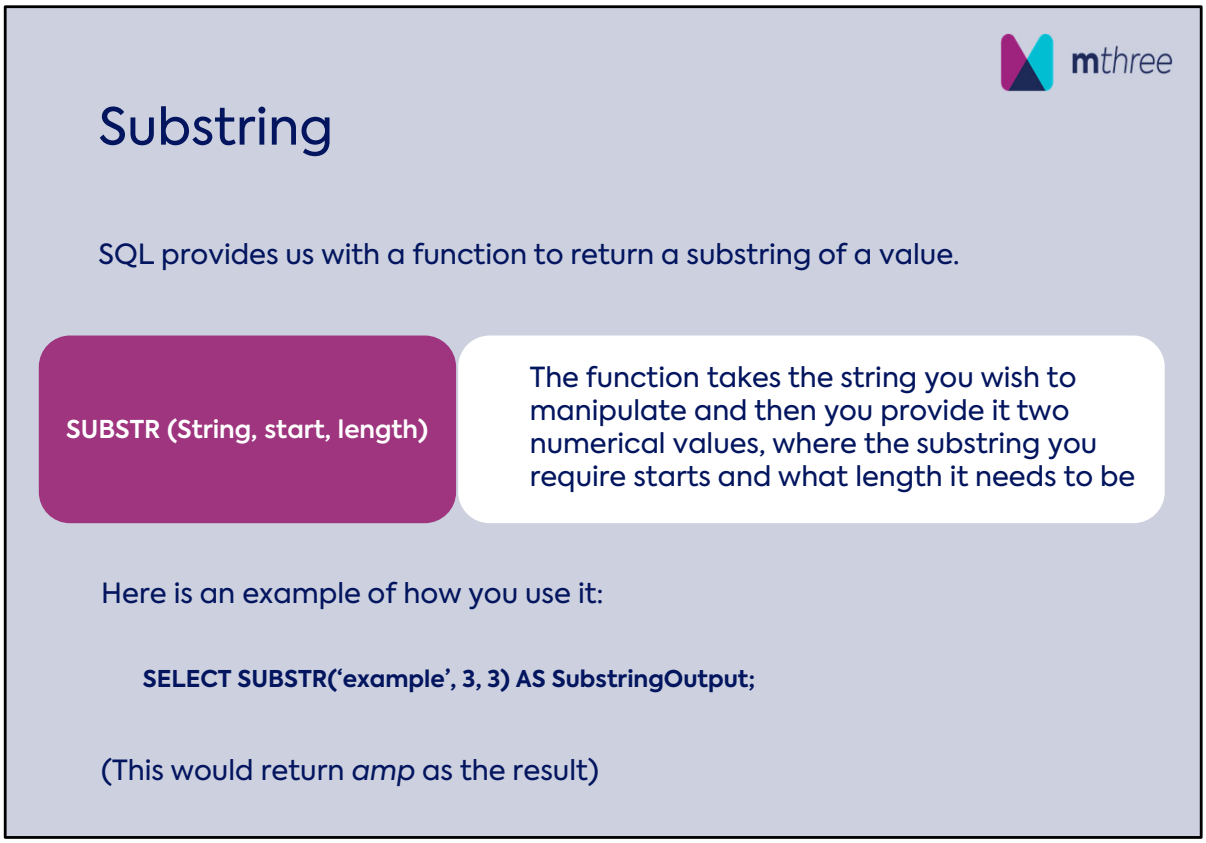
- String1 – the first string is the one that will be searched
- String2 – the pattern we are searching for

The method will return the position at which the string starts.

```
SELECT INSTR(column, "example") FROM table;
```

Trainer/Trainee Notes

Another extremely useful search function across the database.



Trainer/Trainee Notes

Notice in this example we did not even have to run the query against a table – you can however use it against a column if you want to.

Replace

You may want to replace a substring with different values. The replace function with pattern matching allows you to this.

```
REPLACE(string, original, newValue)
```

```
SELECT REPLACE('Example string', 'string', 'strong');
```

Here we are simply replacing the word *string* with *strong* in the string "Example string"

Trainer/Trainee Notes

Remember this is not going to change the underlying value in the database, only the results from your query.

Coalesce Function

We have seen in some of our data that we can have **null** values. The coalesce function when given a list will return the first non **null** value.

For example, say you had a table containing personal data such as home phone, work phone and cell – perhaps you wish to just return the first value that is not null for each person.

```
SELECT COALESCE(null, null, 'A', null, 'B');
```

This will return A as it is the first non-null value.

Trainer/Trainee Notes

Another useful command – we will demo it later and how you may find it useful.

SQL Case Statements

Like we see in most programming languages, SQL allows us to use case statements to achieve an outcome.

```
CASE
      WHEN condition1 THEN result1
      WHEN condition2 THEN result2
      WHEN condition_x THEN result_x
      ELSE result
END;
```

Conditions are evaluated in the order they are listed, and it is always important to ensure you have a catch all ELSE statement at the end.

Trainer/Trainee Notes

You can use case statements in various places of your query including your order by clause and in the main part of the query.