Retrieving data using the select statement

Capabilities of SQL SELECT Statements

Single line comment

```
-- this is a single line comment
```

Multiple lines comments

```
/* this is
multi lines
comments
*/
```

To select all the columns/rows in a table use:

```
SELECT *
FROM employees;
```

To select specific columns

```
SELECT DEPARTMENT_ID, DEPARTMENT_NAME
FROM DEPARTMENTS;
```

Arithmetic expressions and NULL values

Using Arithmetic Expressions (+, -, *, /)

```
SELECT EMPLOYEE_ID, FIRST_NAME, SALARY, SALARY+100, SALARY+(SALARY*0.10)
FROM EMPLOYEES;
```

To know null values

NULL is a value that is unavailable, unassigned, unknown, or inapplicable.

Null is not the same as zero or a blank space

```
SELECT last_name, job_id, salary, commission_pct
FROM EMPLOYEES;
```

Arithmetic expressions containing a null value evaluate to null

```
SELECT
last_name, job_id, salary, commission_pct, commission_pct + 10
```

```
FROM EMPLOYEES;
```

Column Alias, Concatenation, Distinct and DESCRIBE

Defining a column alias (Rename a column heading)

```
SELECT last_name, last_name AS name, LAST_NAME lname, LAST_NAME" LAST nAME"
FROM EMPLOYEES;
```

LAST_NAME	NAME	LNAME	LAST nAME

Concatenation Operator | | Links columns or character strings
Literal (A literal is a character, a number, or a date that is included in the SELECT statement)

```
SELECT FIRST_NAME, LAST_NAME, FIRST_NAME||LAST_NAME "full name",
FIRST_NAME||' '||LAST_NAME "full name with space" --Using Literal Character Strings
FROM EMPLOYEES;
```

FIRST_NAME	LAST_NAME	full name	full name with space
Ellen	Abel	EllenAbel	Ellen Abel

```
SELECT FIRST_NAME ||' work in department '|| DEPARTMENT_ID
FROM EMPLOYEES;
```

FIRST_NAME||'WORKINDEPARTMENT'||DEPARTMENT_ID
Steven work in department 90

```
SELECT FIRST_NAME ||q'[ work in department]'|| DEPARTMENT_ID
FROM EMPLOYEES;
```

```
SELECT FIRST_NAME ||q'( work in department)'|| DEPARTMENT_ID
FROM EMPLOYEES;
```

Using DISTINCT

```
SELECT DISTINCT DEPARTMENT_ID
FROM EMPLOYEES;
```

You can use many columns in distinct

```
SELECT DISTINCT DEPARTMENT_ID, JOB_ID
FROM EMPLOYEES;
```

DESCRIBE or DESC command:

Use the DESCRIBE command to display the structure of a table

```
DESCRIBE EMPLOYEES;

DESC EMPLOYESS;
```