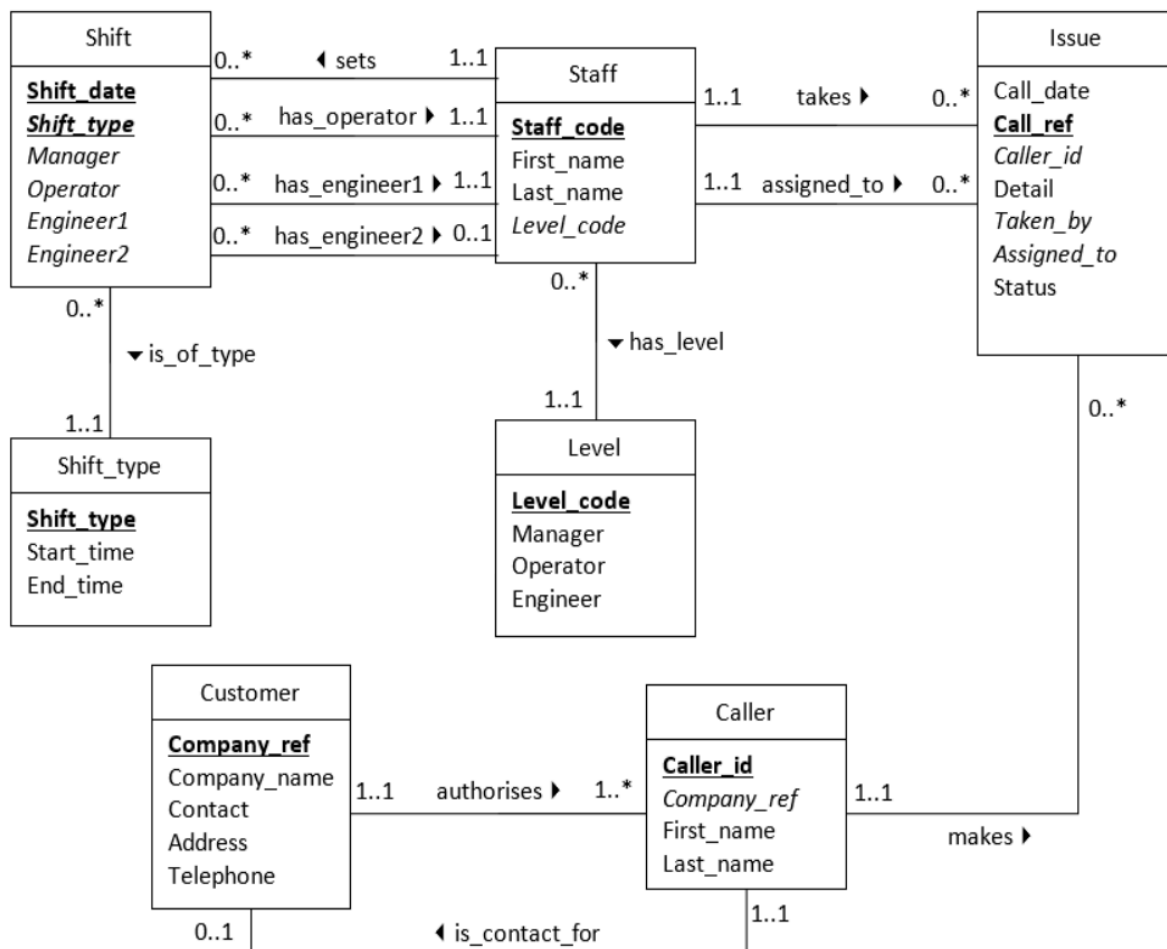


# SQL

## Assignment 01

A software firm's rapid growth in sales has led to a substantial increase in customer support requests, straining their existing support system. The current method, relying on multiple spreadsheets to track and allocate support cases to engineers, is becoming increasingly cumbersome and vulnerable to errors, necessitating a more efficient and reliable solution.

Below is the ERD for you to review thoroughly.



On the next page, you will find your LOs and Questions!

1. There are three issues that include the words "index" and "Oracle". Find the call\_date for each of them.

call_date	call_ref
2017-08-12 16:00:00	1308
2017-08-16 14:54:00	1697
2017-08-16 19:12:00	1731

2. Samantha Hall made three calls on 2017-08-14. Show the date and time for each?
3. There are 500 calls in the system (roughly). Write a query that shows the number that has each status.
4. Calls are not normally assigned to a manager but it does happen. How many calls have been assigned to staff who are at Manager Level?
5. Show the manager for each shift. Your output should include the shift date and type; also the first and last name of the manager.

6. List the Company name and the number of calls for those companies with more than 18 calls.
7. Find the callers who have never made a call. Show first name and last name#
8. For each customer show: Company name, contact name, number of calls where the number of calls is fewer than 5
9. For each shift show the number of staff assigned. Beware that some roles may be NULL and that the same person might have been assigned to multiple roles (The roles are 'Manager', 'Operator', 'Engineer1', 'Engineer2').

Shift_date	Shift_type	cw
2017-08-12	Early	4
2017-08-12	Late	4
2017-08-13	Early	3
2017-08-13	Late	2
2017-08-14	Early	4
2017-08-14	Late	4
2017-08-15	Early	4
2017-08-15	Late	4
2017-08-16	Early	4
2017-08-16	Late	4

10. Caller 'Harry' claims that the operator who took his most recent call was abusive and insulting. Find out who took the call (full name) and when.

11. Show the manager and number of calls received for each hour of the day on 2017-08-12

**12. 80/20 rule. It is said that 80% of the calls are generated by 20% of the callers. Is this true? What percentage of calls are generated by the most active 20% of callers.**

*Note - It might not be possible to do this in one query but try away and explore, it just might :*

13. Customers who call in the last five minutes of a shift are annoying. Find the most active customer who has never been annoying.

14. If every caller registered with a customer makes at least one call in one day then that customer has "maximal usage" of the service. List the maximal customers for 2017-08-13.

15. Consecutive calls occur when an operator deals with two callers within 10 minutes. Find the longest sequence of consecutive calls – give the name of the operator and the first and last call date in the sequence.