**Foundation**

SQL

Module 9

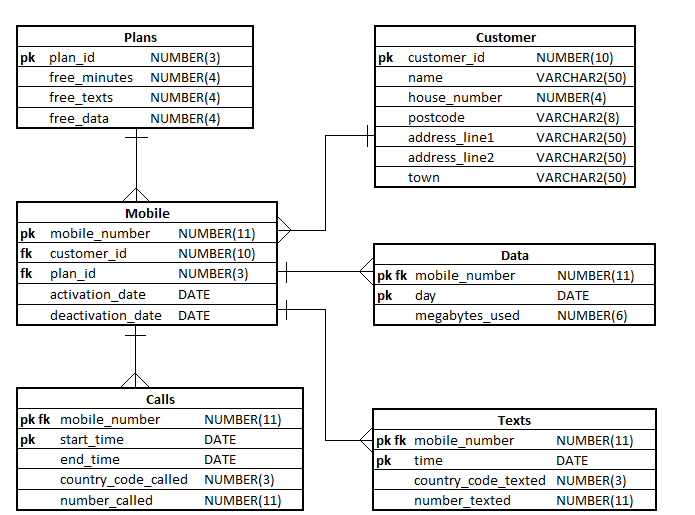
Aggregate Functions – Query reading

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**Document change and version control**

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| **Reason for Change** | **Author** | **Date of Change** | **New Version No** |
| Creation of document | Nick Lawton | 26/06/2017 | v1.0 |
| Two mistakes in question 5 rectified:   1. COUNT(number\_called) changed to COUNT(number\_texted). | Nikola Ignjatovic | 26/05/2020 | v1.1 |
| A mistake in question 6 rectified: the query groups records by customers’ name, thus if there are more customers with the same name it would calculate the number of mobile phones for all of them together, rather than separately. The problem is fixed by including the customer\_id to both SELECT and GROUP BY clauses. | Nikola Ignjatovic | 21/07/2021 | v1.2 |
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**Exercise 1**

## Describe in simple language what each of the following queries will return:

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| **Questions** |
| 1. SELECT AVG(megabytes\_used)   FROM data; |
| 1. SELECT mobile\_number,   COUNT(\*)  FROM calls  GROUP BY mobile\_number; |
| 1. SELECT mobile\_number,   SUM(megabytes\_used)  FROM data  GROUP BY mobile\_number; |
| 1. SELECT mobile\_number,   TO\_CHAR(day,’YYMM’)  SUM(megabytes\_used)  FROM data  GROUP BY mobile\_number, TO\_CHAR(day,’YYMM’); |
| 1. SELECT mobile\_number,   COUNT(number\_texted)  FROM texts  WHERE TO\_CHAR(time,’YYMM’) = TO\_CHAR(SYSDATE,’YYMM’)  GROUP BY mobile\_number; |
| 1. SELECT c.customer\_id,   c.name,  COUNT(m.customer\_id)  FROM customers c  INNER JOIN  mobiles m  ON m.customer\_id = c.customer\_id  GROUP BY c.customer\_id,  c.name; |
| The following queries either produce an error, meaningless or pointless output.Explain which is which:  1. SELECT mobile\_number,   number\_called,  COUNT(number\_called)  FROM calls  GROUP BY mobile\_number; |
| 1. SELECT plan\_id,   MAX(free\_minutes)  FROM plans  GROUP BY plan\_id; |

1. SELECT AVG(megabytes\_used)

FROM data

GROUP BY mobile\_number;