



ASSESSMENT 2 BRIEF	
Subject Code and Title	MIS602 Data Modelling and Database Design
Assessment	Database Implementation
Individual/Group	Individual
Length	N/A
Learning Outcomes	The Subject Learning Outcomes demonstrated by successful completion of the task below include:  b) Design solutions applying relational database techniques to complex problems and communicate these solutions to all stakeholders.
Submission	Due by 11:55pm AEST/AEDT Sunday end of Module 4.2
Weighting	35%
Total Marks	100 Marks

### Task Summary

In this assessment, you are required to demonstrate your ability to understand the requirements for various data information requests from an existing database and develop appropriate SQL statements to satisfy those requirements.

### Context

Being able to query a database is a fundamental skill that is required by all information systems professionals who work with relational databases. In this assessment, you will utilize the basic query skills that are typically used to extract information for analysis, reporting and data cleansing in a data management setting. Timely provisioning of key business information promotes effective communication and enhanced solution delivery.

### Task Instructions

1. Please read the attached MIS602\_Assessment 2\_Data Implementation\_ Case study.
2. Examine the relational model and ER diagram and derive the SQL queries to return the required information.
3. Provide SQL statements and the query output for the following:
  1. List all the customers who live in any part of CAULFIELD. List only the Customer ID, full name, date of birth and suburb **(5 marks)**
  2. List all of the active staff. Show their Staff ID, full name and weekly salary assuming that they work a 38 hour week **(3 marks)**
  3. Which plan has the most expensive contract to break? **(5 marks)**
  4. Which brands of mobile phone does this company sell? List only the unique brand names **(3 marks)**
  5. Which customer is not able to purchase a phone? Use a query to explain why. Hint: Review the customer data **(3 marks)**
  6. How many of each phone plan have been sold? **(5 marks)**
  7. What is the average age of an Apple phone user? **(8 marks)**
  8. What are the first and most recent mobile phone purchases? **(3 marks)**
  9. i. For calls made in 2018 how many calls were made on the weekend? **(5 marks)**  
ii. For calls made in 2018 how many calls were made on each day of the weekend? **(3 marks)**



10. Provide a listing of the utilization of each tower and its location i.e. how busy each tower is based on the number of connections. Put the busiest tower at the top of the list **(3 marks)**
11. Did any users on the 'Large' plan exceed their monthly allowance during August 2018? **(8 marks)**
12. The company is upgrading all their 3G towers from to 5G.
  - i. How many towers will be upgraded? **(1 mark)**
  - ii. what SQL will be needed to update the database to reflect the upgrades? **(2 marks)**
13. i. List the full name, join date, resigned date of each staff member and name, join date and resigned date of their manager **(3 marks)**  
ii. What do you observe with the data? **(2 marks)**
14. How much revenue was generated in 2017 by each plan from call charges. Format the output as currency i.e. \$123.45 **(8 marks)**
15. List the customers who made phone calls longer than 200 minutes **(5 marks)**
16. Which customers have more than one mobile phone? List the customer name, suburb and state. Order by the customer name **(8 marks)**
17. Are there any mobile phone plans that are currently unused? This can be obtained a number of ways. Demonstrate this by using the following two query types
  - i. Nested subquery **(3 marks)**
  - ii. Outer join **(3 marks)**
18. List the oldest and the youngest customers in the postcodes 3000 and 3102. Show the customer full name age and suburb details **(3 marks)**
19. i. Create a view that shows the popularity of each phone colour **(1 mark)**  
ii. Use this view in a query to determine the least popular phone colour **(2 marks)**
20. The billing team is getting returned mail because of bad customer addresses. This is causing a loss in revenue.
  - i. Review the customer data and find at least 3 issues **(3 marks)**
  - ii. Provide the SQL statements to correct the data problems **(2 marks)**

**Total 100 marks**

4. The database used for this assignment is available in 'MIS602\_Assessment 2\_Database SQL Files' folder. Please download the files from this folder.
5. All statements and first 10 lines of output need to be neatly presented. Please save all your SQL statements and output into a single word document and submit it via the **Assessment** link in the main navigation menu.

### Referencing

It is essential that you use appropriate APA style for citing and referencing research. Please see more information on referencing here [http://library.laureate.net.au/research\\_skills/referencing](http://library.laureate.net.au/research_skills/referencing)

### Submission Instructions

Submit Assessment 2 via the **Assessment** link in the main navigation menu in MIS602 Database Modelling and Database Design. The Learning Facilitator will provide feedback via the Grade Centre in the LMS portal. Feedback can be viewed in My Grades.

### Academic Integrity Declaration

I declare that except where I have referenced, the work I am submitting for this assessment task is my own work. I have read and am aware of Torrens University Australia Academic Integrity Policy and Procedure viewable online at <http://www.torrens.edu.au/policies-and-forms>  
I am aware that I need to keep a copy of all submitted material and their drafts, and I will do so accordingly.

### Assessment Rubric

Assessment Criteria	Fail (Unacceptable) 0-49%	Pass (Functional) 50-64%	Credit (Proficient) 65-74%	Distinction (Advanced) 75 -84%	High Distinction (Exceptional) 85-100%
<ul style="list-style-type: none"> <li>➤ <b>Correct and complete queries</b></li> <li>➤ <b>Display only required information</b></li> <li>➤ <b>Demonstration of additional AQL knowledge</b></li> </ul> <b>100%</b>	Queries are incorrectly answered with marks only sufficient to attain a F(ail).	Queries correctly answered with sufficient marks to attain a (P)ass	Queries correctly answered with sufficient marks to attain a (C)redit. Display only required information.	Queries correctly answered with sufficient marks to attain a (D)istinction. Display only required information Display additional SQL knowledge such as column formatting, table alias, additional calculations etc	Queries correctly answered with sufficient marks to attain a (HD) High Distinction. Display only required information. Display additional SQL knowledge. Well formatted queries. Results returned in a meaningful order.