This document provides you with information about the requirements for assessment. Detailed instructions and resources are included to help you to complete and submit the task. The Criterion Reference Assessment (CRA) Rubric that markers use to grade the assessment task is included and should be used as a guide when working on the assessment task.

Task Overview

Assessment name:	Project (applied)
Task description:	In this assessment, you will be working in groups of 4 people (preferably within your registered workshop) to complete parts A and B. **Part A:** You will create a database for the scenario described under Part A below. Subsequent to reading the scenario, please follow the instructions and complete all the questions to the best of your abilities. **Part B:** You will be asked to create your own scenario and develop queries for it. You are expected to submit the queries and paste the screenshot of the output of both tasks in your report. You may use Mongo shell or Compass, unless stated explicitly.
Learning outcomes addressed:	1. Describe key issues for modern data management and identify corresponding technologies to address the issues, independent of any specific platform or framework. 3. Design and develop solutions to manage data using modern data management technologies. 4. Work collaboratively with others to efficiently manage and deliver on projects related to the development of modern data management solutions for a client.
Due Date:	Monday 12th September 2021 (Week 7) at 23:59 (AEST), via Blackboard.
Length:	Please answer all queries with explanations where required. You need to have the query and the screenshot of the document before and after executing the query.

Weighting:	30%
Individual or Group:	Group and Individual Components
Authentic Assessment:	Yes
Formative/Summative:	Summative
How will I be assessed:	7-point grading scale using a rubric. Technical Report will relate to the first four criteria on the rubric, while the Peer Evaluation ratings will contribute to the 'Team collaboration' criterion. Group work contributes towards 20% of this assessment. The group section of the rubric will be used to mark the group work. The individual tasks in this assessment contribute towards 10% of this assessment. For individual marks, the individual section of the rubric will be used.

Task details

What you will do:	1. Read the Criterion Reference Assessment 2. Complete Part A Questions 1 - 15 (see Appendix 1) 3. Complete Part B Question 16 (see Appendix 1) 4. You will also rate yourself and your peers, in terms of how you have contributed to the group submission.
Presentation requirements:	The brief technical report needs to written, with: • 12-point font • Single linespacing • Use of graphs or other forms of graphics to complement your findings is encouraged. • Screenshots of the actual query and the document(s) before executing and after executing the query are required. A form for the peer evaluation of group work will be provided (Appendix 2) and you need to fill in the gaps. All documents saved as a **single zip file** for submission.

	Use Vancouver (preferred) or APA referencing if you have any sources to cite, ensuring you are consistent with the style you use.

Resources needed to complete task:	• IAB206 Blackboard site • Appendix 1: Part A and Part B Requirements • Appendix 2: Peer Evaluation Form • QUT Cite|Write APA guide

Submission Information

	You need to submit a **zip file** containing: (i) A brief technical report containing the screenshots (before and after query) and explanations (where required) for Part A and Part B. (ii) The JSON script you created originally for Part A and Part B. (iii) The final JSON script ***after*** all the queries have been implemented for Part A and Part B. (iv) Completed peer-evaluation of group work form (Appendix X).
How to submit:	Only one submission per team is to be submitted and the submission is due on **12th September 2021.** You will see a submission link in the assessment section of the IAB206 page in Blackboard by 5th September 2021. Note that the submission deadline set in Blackboard is a hard deadline and the submission link will be disabled by the system once the deadline is reached. (i) Each team should register their team details on Blackboard. The assignment file name should be IAB206_Team#_A1.zip. (Replace ## with your team number. Example: IAB206_Team5_A1.zip) (ii) Each submission must contain a declaration, signed by all group members, stating that they have viewed the final version of the assignment that is to be submitted and that it is their original work. (iii) Each submission must contain a completed the peer-evaluation of group work form. Late submissions without accompanying eligible extension will be given a grade of 0 as per the QUT policy for late assessment, MOPP 6.3.5.

What feedback will I receive?	Under normal circumstances, you will receive individual written feedback on this assessment task within 15 days of submission. The teaching team will be available to answer specific questions about the assessment, but not to pre-mark assessments. Teaching staff will NOT read report drafts and review detailed models prior to the submission. Students are welcome to discuss any queries about the feedback they will receive.
Moderation:	All staff who are assessing your work meet to discuss and compare their judgements before marks or grades are finalised.

Academic Integrity

As a student of the QUT academic community, you are asked to work to uphold the principles of academic integrity during your course of study. QUT sets expectations and responsibilities of students, more specifically it states that students "adopt an ethical approach to academic work and assessment in accordance with this policy and the Student Code of Conduct. E/2.1 (MOPP C/5.3 Academic Integrity).

At university, students are expected to demonstrate their own understanding and thinking using the ideas provided by 'others' to support and inform their work, always making due acknowledgement to the source. While we encourage peer learning, it is not appropriate to share assignments with other students unless your assessment piece has been stated as being a group assignment. If you do share your assignment with another student, and they copy part of or all of your assignment for their submission, this is considered collusion and you may also be reported for academic misconduct. If you are unsure and need further information you can find this at: http://www.mopp.qut.edu.au/C/C_05_03.jsp#C_05_03.03.mdoc.

Appendix 1: Part A and Part B Requirements

PART A

Scenario
Consider this to be your final semester with you graduating soon. An obvious step after graduation would be to look and apply for jobs. Before graduating, you decide to use the skills you learned in IAB206 to prepare a social network database using MongoDB.

The objective is to develop a database of 30 close professional contacts you had developed during your study at QUT as a means to approach the right person with the right skill for a job, or request for reference. Your LinkedIn profile (if you have one) is a good resource, but every time you visit a person's profile, that person is notified. This is something that you do not want, especially when you will be looking at the profiles of people on a frequent basis to decide whom to contact and for what. Hence, the idea of your own private, flexible database.

CREATE

Question 1. Create a database with a justifiable name in MongoDB Atlas Cluster.

Question 2. Think of a document structure you would like to have for each contact. You need to have a minimum of 10 fields. We are providing five in the assessment, the other five (or more) need to be added based on a logical argument. We have also provided a suggested structure that can serve as guidance.

Out of 10 fields:
1. A minimum of two fields should be of array data type, and
2. A minimum of one field should have an embedded document.

The five fields you are required to have are as follows:

Field	Description	Type
Skills	Captures the skills possessed by the contact	Array of String
Organisation	Captures all the organisations the contact has worked in	Document Type
Years of Experience	Captures the years of experience the contact has had in industry	Integer
Meeting Place	Captures the place where you met the contact and other details (event, date, time etc)	Document Type

Overall Impression	Your overall impression of the contact in terms of his likelihood of helping you and the area he is working in	String

Possible document structure follows. Please note: If you wish to learn MongoDB, it is not recommended that you use the suggested structure but come up with your own.

Name: String
Meeting Place: Document
TypeAge: Integer
Organisation: Nested Document [Name, Position(array)]
Years of experience:
IntegerSkills: Array of
String Contact Number:
String
Contact Email: Document type [Personal, Work]LinkedIn Profile: String
Overall Impression: String

Please provide a document structure as a solution to this question.

Question 3. Enter 30 documents with field and values, based on the structure identified in Question 2. Please note that **two documents should not have** all the fields identified in Question 2.

**Before you populate the values in your database, it would be a good idea to carefully go through the remaining questions to note some of the mandatory values you need to have in your database.*

READ (Use MongoDB Shell)

You are expected to paste screenshots of the queries and results in the report. Please refer to submission details for further information.

Question 4. Write a query that looks for a contact with current organisation as some university and the position as lecturer.

Question 5. Write a query extracting the name of an individual who has at least one of these skills: 'modern data management', 'process mining', and 'automation'.

Question 6. Write a query extracting the name of an individual whose overall impression is 'good' and years of experience is greater than or equal to 10.

Question 7. Create a scenario and mention the data you will need for it. Based on that write your own read query.

**Please note that for this question each member in the group needs to have their own individual query. In other words, this question will be marked on an individual basis. In the report when you paste the query and the output, please put the name of the individual group member beside the query s/he created.*

UPDATE (Use MongoDB Shell)

Question 8. Write a query to update the email address of a contact that you have in your database.

Question 9. Write a query to increment the years of experience of a contact with current organisation of your choice by 2.

Question 10. Write a query to update the meeting place, date, and time of a contact of your choice.

Question 11. Update the value of skill of a contact of your choice from 'databases' to 'modern databases'.

Question 12. Find a contact with the current organisation as 'QUT' and update the skills to add a new skill: 'automation'.

Question 13. Create a scenario and mention the data you will need for it. Based on this scenario you have come up with, write your own update query.

**Please note that for this question each member in the group needs to have their own individual query. In other words, this question will be marked on an individual basis. In the report when you paste the query and the output, please put the name of the individual group member beside the query s/he created.*

DELETE

Question 14. Delete a document (i.e. details of a contact) of your choice using a specific condition.

Question 15. Delete all documents relating to an organisation of your choice. *It is recommended that you perform an export of your collection before performing such operations. Refer to: https://docs.mongodb.com/compass/master/import-export

PART B

Question 16. Task 1 may have given you an understanding of the application of MongoDB in the scenario presented in this assessment. Based on this understanding, in this task, you are expected to create your own scenario where you believe MongoDB can be of use. For the scenario you have developed, implement 3 create, 3 read, 3 update, and 1 delete queries. Your document is expected to have a minimum of 5 fields. Please note added complexity will not result in additional marks.

Appendix 2: Peer Evaluation Form

Write the name and student number of each of your group members in a separate column.
For each person, indicate the extent to which your team agrees with the statement on the left.

SA – Strongly Agree; A – Agree; D – Disagree; SD – Strongly Disagree

Evaluation Criteria	**Group member**	**Group member**	**Group member**	**Group Member**
Attends group meetings and contributes meaningfully to group discussions.	SA/A/D/SD	SA/A/D/SD	SA/A/D/SD	SA/A/D/SD
Completes assigned tasks on time.	SA/A/D/SD	SA/A/D/SD	SA/A/D/SD	SA/A/D/SD
Prepares high-quality work.	SA/A/D/SD	SA/A/D/SD	SA/A/D/SD	SA/A/D/SD
Demonstrates a cooperative and supportive attitude.	SA/A/D/SD	SA/A/D/SD	SA/A/D/SD	SA/A/D/SD
Contributes significantly to the success of the project.	SA/A/D/SD	SA/A/D/SD	SA/A/D/SD	SA/A/D/SD
Based on these considerations, state a peer mark that each team member should receive out of 10.	/10	/10	/10	/10

Adapted from a peer evaluation form developed at Johns Hopkins University (October, 2006)
Adapted from
https://www.cmu.edu/teaching/designteach/design/instructionalstrategies/groupprojects/tools/index.html

IAB206 | MODERN DATA MANAGEMENT | ASSESSMENT TASK 1 RUBRIC | 30% WEIGHT

Criteria	High Distinction 100 – 85%	Distinction 84 – 75%	Credit 74 – 65%	Pass 64 – 50%	Marginal Fail 49 – 40%	Low Fail 39 – 1%	No Evidence
Group (20% of overall task weighting)							
NoSQL Database creation (20%)	Database creation script runs without any issue creating all database objects as required and populating data. Can be used as a model solution.	Comprehensively creates database without any issues creating all database objects as required and populating data. Can be used as a model solution after making minor corrections.	Most of the database objects are created as required and populating data. Can be used as a model solution after making few corrections.	Makes an attempt to create database objects but requires significant changes to make it work. Cannot be used as a model solution.	Limited understanding of database creation process resulting in failure of creating most of the database objects.	Script does not work.	No evidence of addressing this criterion.
Problem-solving skills *Relevant for Task 16* (10%)	Innovative and insightful solution to the problem provided.	Logical, consistent solution to the problem.	Appropriate and efficient strategies were chosen for solving the problem.	The problem is defined/identified and contributing factors/elements listed. Problem exploration evident.	Limited problem solving evidenced.	Problem is not clearly articulated, and no methodology is evident in addressing the problem.	No evidence of addressing this criterion.
Execution of CRUD (create, read, update, and delete) queries (50%)	All aspects of the queries were accurate and complete. The right operators were used. Could be used as a model solution.	Most aspects of the queries were accurate and complete. Most queries use the right operators. Could be used as a model solution after minor corrections.	Most of the queries work as intended retrieving data with some minor corrections. Could be used as a model solution after making few corrections.	Most of the queries work as intended to retrieve data with major corrections.	Some queries work as intended to retrieve data as required while others make an unsuccessful attempt.	None of queries work as intended to retrieve data as required.	No evidence of addressing this criterion.
Presentation Requirement (10%)	All presentation requirements are fulfilled. Screenshot of query and document(s) before and after executing the query are present. Explanation provided where required.	Most presentation requirements are fulfilled. Most screenshots of query and document(s) before and after executing the query are present. Explanation at most places is present.	Presentation requirements are not fulfilled for all tasks. Not all tasks have the required explanations.	Limited evidence of presentation requirements. Limited tasks have explanations.	Most tasks do not satisfy the presentation requirements. Explanation is missing for most tasks.	Presentation requirements have not been considered.	No evidence of addressing this criterion.

Team Collaboration (10%)	Peer evaluation provides clear evidence of team collaboration and unity including effective planning of the tasks and equitable individual contributions.	Peer evaluation provides clear evidence of team collaboration and unity including effective planning of the tasks and an equitable split of workload.	Peer evaluation provides evidence of team collaboration and unity including effective planning of the tasks and a mostly equitable split of workload.	Peer evaluation provides some evidence of team collaboration and unity including planning of the tasks and a mostly equitable split of workload. At times, individual contributions are of variable quality.	Peer evaluation provides evidence of infrequent collaboration and an inequitable split of workload. Individual contributions are of variable quality and quantity. Team required redirection at times.	Peer evaluation is incomplete and/or provides little evidence of team collaboration and unity. Team required close monitoring.	No evidence of addressing this criterion.
Individual (10% of overall task weighting) - Task 7 and 13							
Problem-solving skills (30%)	Innovative and insightful solution to the problem provided.	Logical, consistent solution to the problem.	Appropriate and efficient strategies were chosen for solving the problem.	The problem is defined/identified and contributing factors/elements listed. Problem exploration evident.	Limited problem solving evidenced.	Problem is not clearly articulated, and no methodology is evident in addressing the problem.	No evidence of addressing this criterion.
Execution of CRUD (create, read, update, and delete) queries (60%)	All aspects of the queries were accurate and complete. The right operators were used. Could be used as a model solution.	Most aspects of the queries were accurate and complete. Most queries use the right operators. Could be used as a model solution after minor corrections.	Most of the queries work as intended retrieving data with some minor corrections. Could be used as a model solution after making few corrections.	Most of the queries work as intended to retrieve data with major corrections.	Some queries work as intended to retrieve data as required while others make an unsuccessful attempt.	None of queries work as intended to retrieve data as required.	No evidence of addressing this criterion.
Presentation Requirement (10%)	All presentation requirements are fulfilled. Screenshot of query and document(s) before and after executing the query are present. Explanation provided where	Most presentation requirements are fulfilled. Most screenshots of query and document(s) before and after executing the query are present. Explanation at most	Presentation requirements are not fulfilled for all tasks. Not all tasks have the required explanations.	Limited evidence of presentation requirements. Limited tasks have explanations.	Most tasks do not satisfy the presentation requirements. Explanation is missing for most tasks.	Presentation requirements have not been considered.	No evidence of addressing this criterion.

	required.	places is present.					