ASSIGNMENT 2

Storing, Manipulating, and Retrieving Data

Due Date: Friday, 30th October

Weight: 25% (75 Points)

INSTRUCTIONS

Please ensure that you submit your work to the Canvas (**Assignments →
Assessment Task 1B → Assignment 2: Storing, Manipulating, and Retrieving
Data**) by due date.

THIS ASSIGNMENT HAS TWO TASKS:

> *TASK 1: DATA LITERACY CREDENTIAL (15 POINTS)*

> *TASK 2: "EXTREME SPORTS" DATABASE (60 POINTS)*

LATE SUBMISSION:

- If you submit your work late with no approved extension, you will be awarded
  zero points.

EXTENSION OF TIME FOR SUBMISSION OF ASSESSABLE WORK

If you are prevented from submitting an assessment on time, by circumstances outside
your control, you may apply in advance for an extension to the due date. If you are
seeking an extension from the original due date you must apply for it before **Thursday
29th October, 1.30 PM**.

Complete an Application for extension of time for submission of assessable work form
and email it to your teacher and the course coordinator. If the application is approved,
you may be granted an assessment adjustment.

https://www.rmit.edu.au/students/student-essentials/assessment-and-
exams/assessment/extensions-of-time-for-submission-of-assessable-work

ACADEMIC INTEGRITY

In addition to meeting assessment timelines academic integrity is about honest presentation of academic work. Students must be accountable for the originality and validity of assessment submission, and not assist others in any form of plagiarism or cheating.
https://www.rmit.edu.au/students/student-essentials/assessment-and-exams/academic-integrity

WHAT TO SUBMIT (30TH OCTOBER)

Assignments → Assessment Task 1B → Assignment 2: Storing, Manipulating, and Retrieving Data

TASK 1: DATA LITERACY CREDENTIAL (15 POINTS)

✓ To show that you have earned your digital badge, submit a word document file (**MCyourname.docx** ☐) which will contain the URL from your Credential to show that you have earned your digital badge.
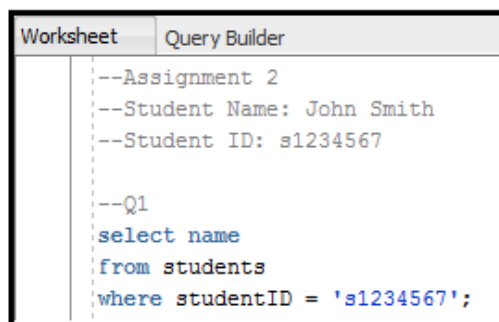
Example: https://rmit.credly.com/....

If you don't submit the URL, you will get zero points for this task.

TASK 2: "EXTREME SPORTS" DATABASE (60 POINTS)

✓ Your SQL file (**A2yourname.sql** ☐) which will contain your SQL queries.
The file should contain your name, student number, and queries.
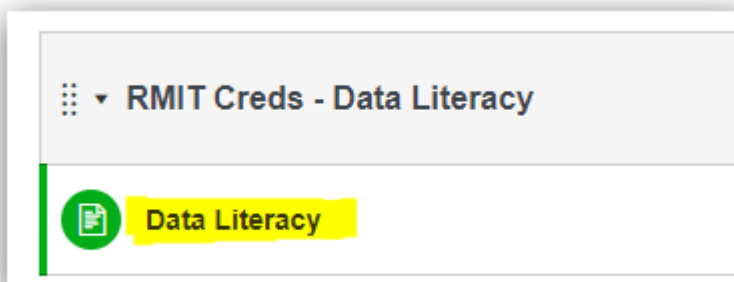
Example:

```
Worksheet    Query Builder

    --Assignment 2
    --Student Name: John Smith
    --Student ID: s1234567

    --Q1
    select name
    from students
    where studentID = 's1234567';
```

TASK 1: DATA LITERACY CREDENTIAL (15 POINTS)

➢ COMPLETE DATA LITERACY CREDENTIAL

Canvas → Modules → Data Literacy

RMIT Creds - Data Literacy

📄 Data Literacy

Number of attempts	2
Pass mark	80%
Estimated completion time	3 hours
Assessment type	Online quiz
Special requirements	None
Marking turnaround time	Allow up to 24 hours for the badge to be issued

➢ REQUEST YOUR BADGE.

➢ SUBMIT YOUR URL FROM YOUR CREDENTIAL TO SHOW THAT YOU HAVE EARNED YOUR DIGITAL BADGE.

TASK 2: "EXTREME SPORTS" DATABASE (60 POINTS)

SCENARIO – "EXTREME SPORTS" SHOPS

"Extreme Sports" is a chain of shops selling equipment, accessories, clothing, and shoes for adventure and extreme sports.

Their business is growing rapidly, and they require a database to work efficiently with the increased amount of data. Extreme Sports management wants you manage their database.

BUSINESS REQUIREMENTS

- A customer can buy items in the shop or order them online.
- The database keeps data about shops, items for sale, customers, orders, and suppliers.
- A customer will open an account (with personal and contact details) in one of the shops.
- The database keeps track on orders. Each order is tracked from the date it was received up to the date of shipment.
- Information about an item contains item name, colour, size, price, and number of items in stock (itemquantityAvailable).
- The shop needs information about suppliers of items.

"EXTREME SPORTS" - SCHEMA

SHOPS (shopID, shopAddress, shopTown, shopPostcode, shopPhone,shopemail)

ITEMS (itemID, itemDescription, itemSize, itemColour, itemPrice, itemQuantityAvailable)

SUPPLIERS (suppID, suppName, suppAddress, suppTown, suppPostcode, suppPhone, suppEmail)

CUSTOMERS (custID, custLName, custFName, custAddress, custTown, custPostCode, custPhone, custEmail, shopID*)

ORDERS (orderN0, orderDate, dispatchDate, custID*)

SHOPS_ITEMS (shopID*, itemID*, shopQuantity)

ORDERS_ITEMS (orderNo*, itemID*, orderQuantity)

SUPPLIERS_ITEMS (suppID*, itemID*, suppQuantity)

DOWNLOAD "EXTREME SPORTS" DATABASE

✓ Download "**Extreme Sports" Database**" files from Canvas.

   o **Assignments → Assessment Task 1B → Assignment 2: Storing, Manipulating, and Retrieving Data**

✓ Run two files: **A2_create_tables.sql** and **A2_insert_data.sql.**

"EXTREME SPORTS" - TABLES

SHOPS

SHOPID	SHOPADDRESS	SHOPTOWN	SHOPPOSTCODE	SHOPPHONE	SHOPEMAIL
MEL3000	156 Elizabeth Street	Melbourne	3000	392557261	melbourne@extremesports.com.au
SYD2000	18 George Street	Sydney	2000	263826482	sydney@xtremesports.com.au
BNE4000	56 James Street	Brisbane	4000	747507219	brisbane@xtremesports.com.au

SUPPLIERS

SUPPID	SUPPNAME	SUPPADDRESS	SUPPTOWN	SUPPPOSTCODE	SUPPPHONE	SUPPEMAIL
MELSUP123	Active Sportswear Melbourne	35 Beaconsfield Street	Melbourne	3001	391887463	melbourne@activesportswear.com.au
MELSUP456	Basic Gym Supplies Melbourne	43 Toorak Road	Melbourne	3005	391846349	melbourne@basicgym.com.au
SYDSUP123	Active Sportswear Sydney	345 Commercial Road	Sydney	2018	285330028	sydney@activesportswear.com.au
SYDSUP456	Basic Gym Supplies Sydney	67 George Street	Sydney	2015	263339213	sydney@basicgym.com.au
BNESUP123	Active Sportswear Brisbane	19 Oxford Street	Brisbane	4001	793092622	brisbane@activesportswear.com.au
BNESUP456	Basic Gym Supplies Brisbane	6 Queen Walk	Brisbane	4015	747592715	brisbane@basicgym.com.au

CUSTOMERS

CUSTID	CUSTLNAME	CUSTFNAME	CUSTADDRESS	CUSTTOWN	CUSTPOSTCODE	CUSTPHONE	CUSTEMAIL	SHOPID
cust123	Grisham	John	18 Smith Street	Melbourne	3002	377292904	patrick@hotmail.com	MEL3000
cust456	Brown	Dan	56 Taylors Road	Taylors Hill	3037	388284567	dan@gmail.com	MEL3000
cust789	Sheldon	Sidney	141 Elizabeth Walk	Melbourne	3006	397489246	sydney@gmail.com	MEL3000
cust135	Higgins	Mary	11 Williamstown Road	Williamstown	3110	317502503	marry@hotmail.com	MEL3000
cust246	La Plante	Lynda	80 George Road	Sydney	2143	217283950	lynda@gmail.com	SYD2000
cust357	Follett	Ken	18 Bondi Way	Bondi	2166	255934032	ken@hotmail.com	SYD2000
cust468	Fulghum	Robert	121 Long Street	Sydney	2455	299102774	robert@outlook.com	SYD2000
cust579	Woolf	Virginia	975 Main Street	Brisbane	4015	707433269	(null)	BNE4000
cust056	Gardner	Lisa	9 Carlton Road	Brisbane	4438	799144839	lisa@hotmail.com	BNE4000
cust000	Tolkien	John	10 Hobbiton Road	Brisbane	4444	777531045	jrr@hobbiton.com	BNE4000

ITEMS

ITEMID	ITEMDESCRIPTION	ITEMSIZE	ITEMCOLOUR	ITEMPRICE	ITEMQUANTITYAVAILABLE
IT00	Multisport Watch	10	Whitestone	499	5
IT01	Western Bulldogs Jersey	M	Blue	100	19
IT02	Socks - 3 pack	6-10	White	14.99	45
IT03	Soccer Ball	4	Yellow	90	20
IT04	AFL Ball	5	Red	90	6
IT05	Cricket Bat	6	White	75	3
IT06	Free Run Sneakers - Mens	11	Black	110	10
IT08	Goggles	S	Clear	39.99	5
IT09	Backpack	(null)	Grey	50	20
IT10	Tennis Balls - 4 pack	(null)	Orange	15	15
IT11	Womens Hooded Jacket	L	Black	130	12
IT12	Drink Bottle	(null)	Blue	20	10
IT13	Drink Bottle	(null)	Red	20	20
IT14	Free Run Sneakers - Womens	10	Black	110	7
IT15	Mens Hooded Jacket	XL	Black	130	25

ORDERS

ORDERNO	ORDERDATE	DISPATCHDATE	CUSTID
1	15/AUG/20	15/AUG/20	cust246
2	15/AUG/20	16/AUG/20	cust135
3	18/AUG/20	25/AUG/20	cust246
4	19/AUG/20	21/AUG/20	cust789
5	23/AUG/20	27/AUG/20	cust468
6	27/AUG/20	03/SEP/20	cust789
7	29/AUG/20	28/SEP/20	cust123
8	03/SEP/20	04/SEP/20	cust456
9	03/SEP/20	08/SEP/20	cust000
10	05/SEP/20	06/SEP/20	cust056
11	08/SEP/20	10/SEP/20	cust056
12	09/SEP/20	10/SEP/20	cust135
13	12/SEP/20	15/SEP/20	cust056
14	14/SEP/20	28/SEP/20	cust000
15	17/SEP/20	20/SEP/20	cust468
16	18/SEP/20	20/SEP/20	cust789
17	21/SEP/20	23/SEP/20	cust123
18	23/SEP/20	28/SEP/20	cust000
19	25/SEP/20	26/SEP/20	cust789
20	27/SEP/20	30/SEP/20	cust135

SHOP_ITEMS

SHOPID	ITEMID	SHOPQUANTITY
MEL3000	IT00	3
MEL3000	IT01	8
MEL3000	IT03	5
MEL3000	IT04	10
MEL3000	IT05	4
MEL3000	IT06	8
MEL3000	IT15	19
SYD2000	IT00	2
SYD2000	IT01	11
SYD2000	IT08	33
SYD2000	IT09	0
SYD2000	IT05	34
SYD2000	IT11	7
SYD2000	IT12	5
BNE4000	IT13	9
BNE4000	IT14	12
BNE4000	IT02	17
BNE4000	IT03	6
BNE4000	IT10	3
BNE4000	IT08	6

ORDER_ITEMS

ORDERNO	ITEMID	ORDERQUANTITY
1	IT00	1
2	IT08	1
3	IT02	1
4	IT10	1
5	IT01	6
6	IT09	1
7	IT06	1
8	IT03	1
9	IT08	2
10	IT11	1
11	IT05	3
12	IT04	1
13	IT12	1
14	IT14	5
15	IT15	1
16	IT04	1
17	IT05	4
18	IT03	1
19	IT11	1
20	IT03	4
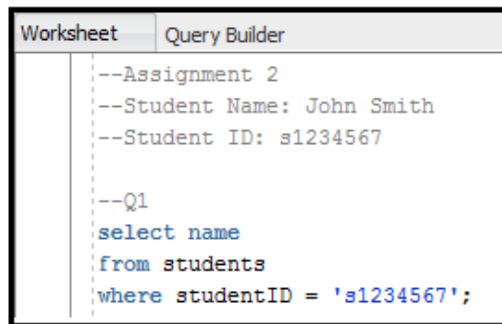
SUPPLIER_ITEMS

SUPPID	ITEMID	SUPPQUANTITY
MELSUP123	IT03	10
MELSUP123	IT04	20
MELSUP123	IT05	332
MELSUP456	IT11	23
MELSUP456	IT01	435
MELSUP456	IT10	3
SYDSUP123	IT12	23
SYDSUP123	IT13	52
SYDSUP123	IT14	124
SYDSUP456	IT02	34
SYDSUP456	IT09	14
SYDSUP456	IT06	79
BNESUP123	IT08	50
BNESUP123	IT15	69
BNESUP123	IT00	60
BNESUP456	IT11	57
BNESUP456	IT01	234
BNESUP456	IT13	13
MELSUP456	IT03	57
SYDSUP123	IT03	63

WITH A REFERENCE TO "EXTREME SPORTS" DATABASE CREATE SQL QUERIES TO ANSWER THE FOLLOWING QUESTIONS. (60 POINTS)

NAME THE SQL FILE WHICH WILL CONTAIN YOUR SQL QUERIES A2YOURNAME.SQL

The file should contain your name, student number, and all queries.

```
Worksheet    Query Builder
    --Assignment 2
    --Student Name: John Smith
    --Student ID: s1234567


    --Q1
    select name
    from students
    where studentID = 's1234567';
```

NOTE:
  ✓ **For each correctly written SQL query that returns correct output you will get full points.**

  ✓ **Points will be deducted for each incorrect query. Points deduction will depend on the type of error.**

CREATE THE FOLLOWING QUERIES IN SQL:

Q1   How many orders were made in August 2020? (2 points)

Q2   Find the total value of all items in the stock (table items). (2 points)

Q3   Create a mailing label for each customer. Use concatenation to join multiple columns. For example: John Smith, 8 Lygon Street, Carlton, 3053. (2 points)

Q4   Prompt the user to input supplier id. Based on the user input, show the supplier name and a full address. (2 points)

Q5   Show item description and price for all items that were sold. Display results in an ascending order based on the price. (3 points)

Q6   For all customers that made an order, show the first name, email address, and the description of all items ordered. (4 points)

Q7   List the item ID and item description for all items that were ordered on or before 18th of September. List only different (distinct) items. (4 points)

Q8   One of the items must be recalled (choose one item from items table). You have to call all customers who have bought that item and inform them about the recall. To do that, you need a list of customers' (who bought the item) first names and phone numbers. Write a query which will create the list. (4 points)

Q9   Which order has the longest dispatch time? Show the order number and the number of days. (3 points)

Q10   Display itemID and item description for items that are available in more than one store. (4 points)

Q11   Which item is the best seller (the highest number of items sold)? Display description and price. (4 points)

Q12   Raise the price of all blue-coloured items by 7.5%. (2 points)

Q13   Discount all items made by a particular supplier. Choose a percentage of discount and a supplier name. (4 points)

Q14   Update a particular order (choose order number) changing its dispatch date to a later date. (2 points)

Q15   Write a query that creates a copy of CUSTOMERS table. Name it CUSTOMERS_COPY. Delete one column from the CUSTOMERS_COPY table and change data type for another column. (3 points)

Q16   The Western Bulldogs (Doggies) are playing finals this year, and all shops are running out of their jerseys. You have to reorder more of them. Display the name, phone number, and email address of all suppliers who supply Western Bulldogs Jersey. (4 points)

Q17   Because of the industrial action in Sydney, the Melbourne shop is running out of stock. They don't know when they will get a new stock, and when they will be able to dispatch the orders. For all orders made after the 20th of September and made by customers registered with the Melbourne shop, change the dispatch date to NULL. (4 points)

Q18   Write a query that creates a view (view_sydney) that contains all information about suppliers from Sydney. Check the data in the view_sydney. (3 points)

Q19   Update any supplier phone in the view_sydney (created in the previous query). Check what happened with the data in the table suppliers. After that, update supplier address for any supplier from Sydney in the table suppliers. Check what happened with the data in the view_sydney (2 points)

Q20   Extreme Sports is opening an online store. For online orders, the shop will accept only credit card payments. Add a new column to the table CUSTOMERS (credit card number), and after that add a credit card number for at least one customer. (2 points)