MODULE NAME:	MODULE CODE:
DATABASES	DBAS6211/d

ASSESSMENT TYPE:	**TEST (PAPER ONLY)**
TOTAL MARK ALLOCATION:	**60 MARKS**
TOTAL HOURS:	**1 HOUR (+10 minutes reading time)**

SETUP TIME – SPECIAL INSTRUCTIONS:

1. *For practical IT tests or exams written on campus, the usual reading time is replaced by an **additional 30-minute setup time** allocated for setup, saving and upload activities.*
2. *Students are allowed to make notes during the 30-minute setup time.*
3. *Students are allowed to **start working** on their practical solutions as soon as the 30-minute setup time starts.*

INSTRUCTIONS:

1. *Please adhere to all instructions in the assessment booklet.*
2. *Independent work is required.*
3. *Ten minutes per hour of the assessment to a maximum of 15 minutes is dedicated to reading time before the start of the assessment. You may make notes on your question paper, but not in your answer sheet. Calculators may not be used during reading time.*
4. *You may not leave the assessment venue during reading time, or during the first hour or during the last 15 minutes of the assessment.*
5. *Ensure that your name is on all pieces of paper or books that you will be submitting. Submit all the pages of this assessment's question paper as well as your answer script.*
6. *Answer all the questions on the answer sheets or in answer booklets provided. The phrase 'END OF PAPER' will appear after the final set question of this assessment.*
7. *Remember to work at a steady pace so that you are able to complete the assessment within the allocated time. Use the mark allocation as a guideline as to how much time to spend on each section.*

Additional instructions:

1. *This is an OPEN BOOK assessment.*
2. *Calculators are allowed.*
3. *For open book assessments, the students may have open access to all resources inclusive of notes, books (hardcopy and e-books) and the Internet. These resources may be accessed as hard copies or as electronic files on electronic devices. All electronic device batteries must be fully charged before the assessment as no charging of devices will be permitted during the sitting of the assessment. The IIE and associated brands accept no liability for the loss or damage incurred to electronic devices used during open book assessments.*
4. *Answer All Questions. .*
5. *Instructions for assessments including practical computer work:*
   - *Use of good programming practice and comments in code is compulsory.*
   - *Save your application in the location indicated by the administrator (e.g. the Z:\ drive or your local drive).*

- *Create a folder as follows: use the module code and your own student number and create a folder with a folder name as per the format shown here:*
- ***StudentNumber_ModuleCode_Test**. Save all files (including any source code files, template files, design files, image files, text files, database files, etc.) within this folder.*
- *E.g., if your student number is 12345, and you are writing an examination for the module DBAS6211, create a folder named **12345_DBAS6211_Test** and use this throughout the session to save all of your files.*
- ***Important:** Upon completion of your assessment, you must save and close all your open files and double click the ExamLog application on your desktop. You must follow the instructions carefully to ensure that the information about the files that you have submitted for this assessment has been logged on the network. Specify the location of your source code on your question paper.*

ACADEMIC HONESTY DECLARATION

Please complete the Academic Honesty Declaration below.

	SIGN
I have read the assessment rules provided in this declaration.	
This assessment is my own work.	
I have not copied any other student's work in this assessment.	
I have not downloaded my assessment response from a website.	
I have not used any AI tool without reviewing, re-writing, and re-working this information, and referencing any AI tools in my work.	
I have not shared this assessment with any other student.	

Question 1 (Marks: 20)

Answer this question in your answer script.

Love Local is a clothing brand that sources products from local designers across South Africa.

Draw an Entity Relationship Diagram (ERD) using Unified Modelling Language (UML) notation according to the below business rules. Your design should be at the logical level – include primary and foreign key fields, and remember to remove any many-to-many relationships.

Tip: Pay attention to the mark allocation shown below.

- All entities must have surrogate primary keys.
- Each designer designs one or more products, and every product is designed by exactly one designer.
- The name of each designer should be stored in the database.
- The description of each product must be stored in the database.
- Each product belongs to one specific category, and many products can belong to the same category.
- The description of each category must be stored in the database.
- A product can be available in many sizes, and many products can be the same size.
- The description of each size must be stored in the database.

Tip: Pay attention to the mark allocation shown below.

Marks will be awarded as follows:

Entities	4 marks
Relationships	3 marks
Multiplicities	3 marks
Primary keys	2 marks
Foreign keys	3 marks
Other attributes	4 marks
Correct UML Notation	1 mark
Total	**20 marks**

Question 2 (Marks: 20)

Answer this question in your answer script.

Love Local has branches across South Africa. Branches can be traditional stores, online stores, or mobile stores, such as pop-up stores or markets. Each branch has one or more registered owner(s).

Consider the table in first normal form (1NF) below, and then answer questions 2.1 and 2.2.

BranchID	BranchName	BranchTypeID	BranchType	OwnerID	OwnerName	OwnerEmail
1	Love ZAR	1	Store	3	Thandi Siko	thandi@gmail.com
1	Love ZAR	1	Store	6	Jake Oliver	oliver@gmail.com
2	ZAR Love's To Pop	3	Mobile	2	Steve da Costa	sdacosta@gmail.com
3	ZAR Online	2	Online	4	John Makalima	john@gmail.com
3	ZAR Online	2	Online	8	Jane Makalima	jane@gmail.com
3	ZAR Online	2	Online	7	Steve van Rooyen	steve@gmail.com
4	Ain't It Lovely	1	Store	1	Sarah Coetzee	scoetzee@gmail.com
5	Love my SA	1	Store	5	Bongi Mbete	bmbete@gmail.com

Q.2.1	Normalise the table presented to the second normal form (2NF), showing all steps with explanations. All steps, as well as the final answer, must be in dependency diagram format.	(15)
Q.2.2	Once you have answered Question 2.1, extend your answer to normalise to the third normal form (3NF), showing all steps with explanations. All steps, as well as the final answer, must be in dependency diagram format.	(5)

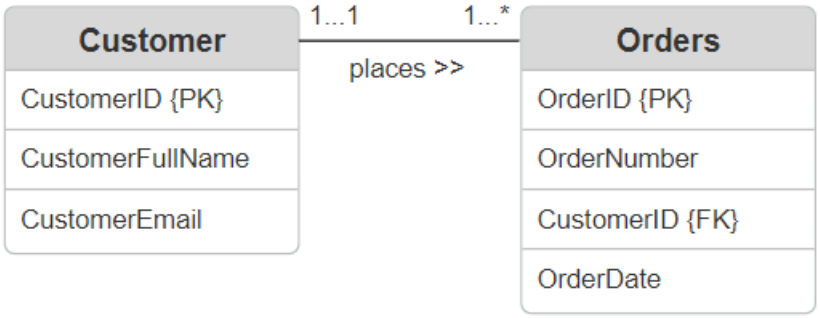
Question 3 (Marks: 20)

Practical computer work: The answer to this question should be submitted electronically.

Using MySQL, create a single Structured Query Language (SQL) script that answers all the questions below. Include comments to indicate which part of the script answers which question.

The script must execute correctly using MySQL to get full marks.

Consider the following extract from an Entity Relationship Diagram (ERD) before answering questions 3.1 to 3.4:



Q.3.1 Write an SQL statement to create the *Customer* table. (4)

Q.3.2 Write a SQL statement to create the *Orders* table. (6)

Q.3.3 Write SQL statements to insert the following data: (4)

Table: Customer

CustomerID	CustomerFullName	CustomerEmail
1	Debbie Duncan	dduncan@yahoo.com

Table: Orders

OrderID	OrderNumber	CustomerID	OrderDate
1	020149	1	2024-02-14

Q.3.4	Write an SQL statement to change the order date from order 1 to 2024-02-13.	(3)
Q.3.5	Write an SQL statement to delete order 1.	(3)

END OF PAPER