



MODULE NAME:	MODULE CODE:
Database Intermediate	DATA6212
Database Intermediate	DATA6212d
Database Intermediate	DATA6212p

ASSESSMENT TYPE:	TEST (PAPER ONLY)
TOTAL MARK ALLOCATION:	60 MARKS
TOTAL HOURS:	1.5 HOURS (+10 minutes reading time)

**INSTRUCTIONS:**

1. Please adhere to all instructions in the assessment booklet.
2. Independent work is required.
3. Five 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 devices 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 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 were writing a test for the

module PROG121, create a folder named **12345\_Prog121\_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 TestLog 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.*

**BACKGROUND INFORMATION**

This test is based on a set of relations that has been set up for a group of music stores. The database contains information about the CDs, Stores, and Availability. The relationships between the tables must be derived from the data in each of the tables. The tables and the information is as follows:

CDs (CD Code, Title, Artist, Number of Tracks, Release Date, Price)

STORES (Store Code, Store Name, Address, City)

AVAILABILITY (CD Code, Store Code, Available Stock)

The data is shown below:

**CDs**

CD_CODE	TITLE	ARTIST	TRACKS	RELEASE_DATE	PRICE
CD001	Awesome 80s Collection	Various	24	1991-01-01	R99
CD002	Anti	Rihanna	13	2016-02-01	R183
CD003	Now 75	Various	22	2017-03-01	R140
CD004	The Afterlove	James Blunt	10	2017-04-01	R140
CD005	Oh My My	One Republic	16	2016-10-01	R151

**STORES**

STORE_CODE	STORE_NAME	ADDRESS	CITY
ST001	Musica	Victoria Wharf Shopping Centre	Cape Town
ST002	Game	City View Shopping Centre	Durban
ST003	Musica	Blue Route Mall	Cape Town
ST004	Makro	Ascot Road	Johannesburg
ST005	Musica	Rooihuiskraal Road	Pretoria

**AVAILABILITY**

CD_CODE	STORE_CODE	AVAILABLE_STOCK
CD002	ST001	13
CD002	ST004	9
CD003	ST005	8
CD004	ST003	5
CD004	ST001	9

Create a database in SQL Server 2012™ named StudentNumber\_DATA6212\_Test and execute the script file provided as a preload. The preload is named: DATA6212TaPreload.sql.

The script file will create all the necessary tables and populate the tables in this database with data.

Provide the appropriate SQL formulation and the result that would be produced for each query given below. Ensure to copy the SQL statements as well as the results into the MS Word document that you have created. Save this file as StudentNumber\_DATA6212\_Test. Write the path and filename of this document on your test paper.

### Question 1

(Marks: 5)

Write a query that will display a list of all the CD titles, as well as artists.

Sample Results:

```

TITLE                                ARTIST
-----
Awesome 80s Collection Various
Anti                                Rihanna
Now 75                               Various
The Afterlove                       James Blunt
Oh My My                           One Republic

```

(5 row(s) affected)

Requirement	Mark	Examiner
Correct SELECT statement used	2	
Correct table used	2	
Correct result obtained	1	
TOTAL	5	

**Question 2****(Marks: 5)**

Write a query that will display all data in the CDs table for only the CDs where the number of tracks are 20 or more.

Sample Results:

CD_CODE	TITLE	ARTIST	TRACKS	RELEASE_DATE	PRICE
CD001	Awesome 80s Collection	Various	24	01.01.1991 00:00:00	99,00
CD003	Now 75	Various	22	01.03.2017 00:00:00	140,00

(2 row(s) affected)

Requirement	Mark	Examiner
Correct SELECT statement used	2	
Correct functions used	2	
Correct result obtained	1	
TOTAL	5	

**Question 3****(Marks: 5)**

Write a query that will display the title and artist of all CDs that are not available in any of the stores.

Sample Results:

TITLE	ARTIST
Awesome 80s Collection	Various
Oh My My	One Republic

(2 row(s) affected)

Requirement	Mark	Examiner
Correct SELECT statement used	1	
Correct JOIN used	3	
Correct result obtained	1	
TOTAL	5	

**Question 4****(Marks: 5)**

Write a query that will display all CD details for CDs that contain the word 'collection' in the CD title.

Sample Results:

CD_CODE	TITLE	ARTIST	TRACKS	RELEASE_DATE	PRICE
CD001	Awesome 80s Collection	Various	24	01.01.1991 00:00:00	99,00

(1 row(s) affected)

Requirement	Mark	Examiner
Correct SELECT statement used	2	
Correct operator used	2	
Correct result obtained	1	
TOTAL	5	

**Question 5****(Marks: 10)**

Write a query that will indicate which store has the most CDs with CD\_CODE 'CD002' in stock. Display the store name, address, city, CD title, artist, and total number of CDs available at the store.

Sample Results:

STORE_NAME	ADDRESS	CITY	TITLE	ARTIST	AVAILABLE_STOCK
Musica	Victoria Wharf Shopping Centre	Cape Town	Anti	Rihanna	13

(1 row(s) affected)

Requirement	Mark	Examiner
Correct SELECT statement used	2	
Correct combination of tables used	3	
Correct clause and order	3	
Correct result obtained	2	
TOTAL	10	

**Question 6****(Marks: 10)**

Write a query that will display the difference between the release date of the various CDs. Display the CD titles, as well as the difference in days, months, and years, each in its own column.

Sample Results:

TITLE	TITLE	DIFF IN DAYS	DIFF IN MONTHS	DIFF IN YEARS
Anti	Awesome 80s Collection	9162	301	25
Now 75	Awesome 80s Collection	9556	314	26
The Afterlove	Awesome 80s Collection	9587	315	26
Oh My My	Awesome 80s Collection	9405	309	25
Now 75	Anti	394	13	1
The Afterlove	Anti	425	14	1
Oh My My	Anti	243	8	0
The Afterlove	Now 75	31	1	0
Now 75	Oh My My	151	5	1
The Afterlove	Oh My My	182	6	1

(10 row(s) affected)

Requirement	Mark	Examiner
Correct SELECT statement used	5	
Correct join used	2	
Correct function used	2	
Correct result obtained	1	
<b>TOTAL</b>	<b>10</b>	

**Question 7****(Marks: 10)**

You are required to calculate how many years each CD has been available (based on the release date) and add an extra column called YEARS\_AVAILABLE in the CD table.

**Sample Results:**

CD_CODE	TITLE	ARTIST	TRACKS	RELEASE_DATE	PRICE	YEARS_AVAILABLE
CD001	Awesome 80s Collection	Various	24	01.01.1991 00:00:00	99,00	26
CD002	Anti	Rihanna	13	01.02.2016 00:00:00	183,00	1
CD003	Now 75	Various	22	01.03.2017 00:00:00	140,00	0
CD004	The Afterlove	James Blunt	10	01.04.2017 00:00:00	140,00	0
CD005	Oh My My	One Republic	16	01.10.2016 00:00:00	151,00	1

(5 row(s) affected)

Requirement	Mark	Examiner
Correct manipulation of the table statement used	2	
Correct insertion of YEARS_AVAILABLE	2	
Correct insertion of YEARS_AVAILABLE values	4	
Correct result obtained	2	
TOTAL	10	



**Question 8****(Marks: 10)**

Write a query to generate a report indicating the total available CDs for each CD. The report should display the CD title, artist, and total available number of CDs. Arrange the report so that the CD titles are arranged in alphabetical order.

Sample Results:

TITLE	ARTIST	TOTAL_AVAILABLE
-----	-----	-----
Anti	Rihanna	22
Awesome 80s Collection	Various	NULL
Now 75	Various	8
Oh My My	One Republic	NULL
The Afterlove	James Blunt	14

(5 row(s) affected)

Requirement	Mark	Examiner
Correct SELECT statement used including aggregate function	4	
Correct combination of table used	2	
Correct clause and order	2	
Correct result obtained	2	
TOTAL	10	

**END OF PAPER**