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. *Answer All Questions .*
4. *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.*
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 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 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.*

Question 1 **(Marks: 40)**

This question relates to creating and altering tables, as well as implementing constraints and referential integrity. Answer all the questions below by creating the necessary script.

Q.1.1 You are required to create the following tables in a database named EVENTS. Mark allocation is as follows: Interns (6 Marks), Departments (4 Marks) and Experience (10 Marks). (20)

INTERNS		
INTERN_ID	VARCHAR(5) NOT NULL	PRIMARY KEY
INTERN_NAME	VARCHAR(30) NOT NULL	
INTERN_SURNAME	VARCHAR(30) NOT NULL	
DATE_OF_BIRTH	DATE NOT NULL	

DEPARTMENTS		
DEPARTMENT_ID	VARCHAR(5) NOT NULL	PRIMARY KEY
DEPARTMENT_NAME	VARCHAR(30) NOT NULL	

EXPERIENCE		
INTERN_ID	VARCHAR(5) NOT NULL	PRIMARY KEY FOREIGN KEY REFERENCES INTERNS(INTERN_ID)
DEPARTMENT_ID	VARCHAR(5) NOT NULL	PRIMARY KEY FOREIGN KEY REFERENCES DEPARTMENTS(DEPARTMENT_ID)
NUMBER_OF_DAYS	SMALLINT NOT NULL	

Q.1.2 Populate the tables created in Question 1.1 with the following data: (10)

INTERNS			
INTERN_ID	**INTERN_NAME**	**INTERN_SURNAME**	**DATE_OF_BIRTH**
I0001	Dominique	Woolridge	1993-04-19
I0002	Nico	Baird	1991-11-19
I0003	Derek	Moore	1992-06-24
I0004	Neo	Petlele	1993-12-29
I0005	Andrew	Crouch	1994-01-30

DEPARTMENTS	
DEPARTMENT_ID	**DEPARTMENT_NAME**
D0001	Web Development
D0002	User Experience
D0003	Database Design
D0004	Testing
D0005	Research

EXPERIENCE		
INTERN_ID	**DEPARTMENT_ID**	**NUMBER_OF_DAYS**
I0001	D0004	20
I0002	D0001	10
I0003	D0003	25
I0003	D0002	15
I0004	D0001	10
I0005	D0004	20
I0005	D0001	15

Mark Allocation	**Mark**	**Examiner**
Interns Table	3	
Departments Table	3	
Experience Table	4	
TOTAL	10	

Q.1.3	Alter the INTERNS table to add a column as specified below: **INTERNS** AGE | SMALLINT	(5)
Q.1.4	Update the contents of the INTERNS table to populate the new AGE field that was added to the table in Question 1.3. The age should be calculated based on the current date and the date of birth.	(5)

Question 2 **(Marks: 20)**

Q.2.1 Write a query that will display the department names in which no interns has worked yet. (5)

Sample Results:

```
DEPARTMENT_NAME
---------------
Research

(1 row(s) affected)
```

Q.2.2 Write a query to generate a report indicating the total number of days worked for each intern. The report should display the intern name and surname, as well as the total number of days worked. Arrange the report so that the records are ordered in descending order based on the number of days worked. (10)

Sample Results:

```
INTERN_NAME  INTERN_SURNAME  TOTAL DAYS WORKED
------------ --------------- ------------------
Derek        Moore           40
Andrew       Crouch          35
Dominique    Woolridge       20
Nico         Baird           10
Neo          Petlele         10

(5 row(s) affected)
```

Q.2.3 Write a query that will indicate which intern has worked the most number of days in department 'D0001'. Display the intern name and surname, department name, and number of days. (5)

Sample Results:

```
INTERN_NAME  INTERN_SURNAME  DEPARTMENT_NAME  NUMBER_OF_DAYS
-----------  --------------  ---------------  --------------
-            -               -                -
Andrew       Crouch          Web Development  15

(1 row(s) affected)
```

END OF PAPER