CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge Career Award in Information and Communications Technology
Advanced Level

RELATIONAL DATABASES **5205/A**

Optional Module: Practical Assessment

2003

1 hour

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

Make sure that your name, Centre number and candidate number are shown on each printout that you are asked to produce.

Carry out **every** instruction in each task.

Tasks are numbered on the left hand side of the page, so that you can see what to do, step by step. On the right hand side of the page for each task you will find a box which you can tick (✓) when you have completed the task; this checklist will help you to track your progress through the assessment.

Before each printout you should proof-read the document to make sure that you have followed all instructions correctly.

At the end of the assessment put **all** your printouts into the Assessment Record Folder.

This document consists of **4** printed pages.

UNIVERSITY of CAMBRIDGE
Local Examinations Syndicate

[Turn over

You are advising the Inuit Gallery, a small art gallery. You are going to demonstrate some of the ways in which a relational database can be used to provide necessary information quickly and in an easily understandable form.

		✓	
1	Using a suitable software package, create a new database.	☐	**1.1.1**
2	Import the files **SCULPT03.CSV, ARTIST03.CSV** and **MATER03.CSV** You will need to use the following information to create the tables:	☐	**1.2.1** **1.2.2** **1.3.1**

Sculpt03	
Field Name	**Type**
Ref	Number
Price	Number, 2dp
Description	Text
Material	Number
Date	Number
Size	Text
Artist	Number

Artist03	
Field Name	**Type**
ArtistID	Number
Name	Text
Location	Text

Mater03	
Field Name	**Type**
ID	Number
Colour	Text
Substance	Text
Stone	Yes/No

3	Establish the following One-to-Many Relationships: *Artist03.ArtistID* 1----∞ *Sculpt03.Artist* *Mater03.ID* 1----∞ *Sculpt03.Material*	☐	**2.1.1** **2.1.2**
4	Supply only the details of sculptures where the *Description* contains the word **bear**. Print the details of these products, in ascending order of *Date* and ascending order of *Description.*	☐	**3.1.1** **3.2.1** **3.2.2** **5.1.1**

[Turn over

You are going to prepare a report which shows details of all the sculptures made by a single sculptor over a particular period.

		✓	
5	Select only the records which represent the sculptures made by artist **25809** before **1999**.	☐	**3.1.2**
6	Prepare and print a report showing this information: • The header should include **Inuit Gallery** and today's date, *ArtistID*, *Name* and *Location* • The detail rows should show *Ref*, *Substance*, *Colour, Description and Price* • Group the data by *Date* • At the end of the report, show the total value of all the items.	☐	**4.1.1** **4.1.2** **4.1.3** **5.1.1**

Your report may look something like this:

Inuit Gallery 23 February 2002

ARTISTID 25809 ***NAME*** TOWATUGA Saqu ***LOCATION*** Iqaluit

Date					
1987	***Ref***	***Substance***	***Colour***	***Description***	***Price***
	999	argillite	grey	BEAR/WHALE SCENE	999.99
1992	***Ref***	***Substance***	***Colour***	***Description***	***Price***
	9999	soapstone	dark green	WHALE	999.99
	999	argillite	olive	POLAR BEAR	999.99
1993	***Ref***	***Substance***	***Colour***	***Description***	***Price***
	9999	caribou horn	cream	SEAL	99.99
				Total:	999.99

You are now going to prepare a report which summarises some information about bear sculptures.

		✓	
7	Select from all the data only the records where the *Description* contains the word **Bear**.	☐	**4.1.1**
8	Using this data, create a cross-tab (pivot table) which shows *Description* as row labels and *Substance* as column headings. Show the numbers of each sculpture where the *Description* contains the word *Bear*	☐	**4.2.1**
9	Add the title **Summary – Materials from which bears are sculpted**, your name, candidate number and today's date to the report and then print it.	☐	**5.1.1**

The pivot table should look something like this:

Summary – Materials from which bears are sculpted		
Description	**argillite**	**walrus tusk**
BEAR/FACE SPIRITS	9	
BEAR/WHALE SCENE	9	
DANCING BEAR	9	
POLAR BEAR	9	9

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RELATIONAL DATABASES **5205/B**

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2003

1 hour

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Carry out **every** instruction in each task.

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[Turn over

You work in the stationery department at the University of Tawara Beach. You are going to demonstrate some of the ways in which a relational database can be used to provide necessary information quickly in an easily understandable form.

		✓	
1	Using a suitable software package, create a new database.	☐	**1.1.1**
2	Import the files **ITEMS03.CSV, DEPT03.CSV** and **ORDER03.CSV** You will need to use the following information to create the tables:	☐	**1.2.1** **1.2.2** **1.3.1**

Items03	
Field Name	**Type**
ItemCode	Number
Price	Number, 2dp
Item	Text
Type	Text
Subtype	Text
Packsize	Number
ReorderLevel	Number
InStock	Number
Supplier	Text

Dept03	
Field Name	**Type**
DeptCode	Number
Name	Text
Signatory	Text
DeliverRoom	Text
Phone	Text

Order03	
Field Name	**Type**
OrderNo	Number
Product	Number
Customer	Number
Date	Date
Quantity	Integer

3	Establish the following One-to-Many Relationships: *Dept03.DeptCode* 1----∞ *Order03.Customer* *Items03.ItemCode* 1----∞ *Order03.Product* Do not enforce referential integrity in these relationships.	☐	**2.1.1** **2.1.2**
4	Select only the details of Items where the supplier is **Dud** and the value for *Instock* is less than the value for *ReorderLevel*. Print the details of these products in ascending order of *Type* and then in ascending order of *ItemCode.*	☐	**3.1.1** **3.1.2** **3.2.1** **3.2.2** **5.1.1**

[Turn over

You are going to prepare a report which shows details of the orders placed by a single department over a particular period.

		✓	
5	Select only the records which represent the orders placed by customer **1427** during **December 2002**.	☐	**3.1.2**
6	Prepare and print a report showing this information: • The header should include **Tawara Beach** and today's date, *DeptCode*, *Name*, *Signatory* and *DeliverRoom* • The detail rows should show *OrderNum*, *ItemCode, Item*, *Price* and *Quantity* • Group the data by *Date* • At the end of the report show the total price for all the items ordered. You should calculate this by multiplying the price and quantity for each item and then total these values.	☐	**4.1.1** **4.1.2** **4.1.3** **5.1.1**

Your report may look something like this:

Tawara Beach

23 February 2002

DeptCode:1427 ***Name:***Admin Dept. – Student Services ***Signatory:***Fitchett Alan ***DeliverRoom:***D375

Order placed on: 02 December 2002

Order	*Item Code*	*Item*	*Price*	*Quantity*
99999	999999	Blue - Highlighter (Pack of 10)	9.99	99

Order placed on: 08 December 2002

Order	*Item Code*	*Item*	*Price*	*Quantity*
99999	999	Paper Clips Large (Box of 1000)	9.99	99

Order placed on: 19 December 2002

Order	*Item Code*	*Item*	*Price*	*Quantity*
99999	9999	Nobo Dry Wipe Eraser	9.99	9
99999	9999	Blu-Tak Economy Size	9.99	99
99999	9999	Battery Procell IND MN1500	9.99	9

Total value 99.99

You are now going to prepare a report which summarises the sales from all the data held in the database.

		✓	
7	Select from all the data only the products where the *Type* is **Pens/Markers**	☐	**4.1.1**
8	Using this data create a cross-tab (pivot table) which shows *Type* as row labels and *Subtype* as column headings. Show the numbers of each product sold where the Type is **Pens and Markers.**	☐	**4.2.1**
9	Add the title **Sales Summary – broken down by category**, your name and today's date to the report and print it.	☐	**5.1.1**

The pivot table should look something like this:

Sales summary – broken down by category									
Type	**Clips**	**Erasers**	**Highlighter**	**Ink Jet Cartridge**	**Misc**	**Mounting Materials**	**Pads**	**Pencils**	**Pens**
Pens/markers			999					99	999