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.

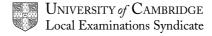
Carry out **every** instruction in each task.

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 (\checkmark) when you have completed the task; this checklist will help you to track your progress through the assessment.

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This document consists of 4 printed pages.



[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	Туре	
Ref	Number	
Price	Number, 2dp	
Description	Text	
Material	Number	
Date	Number	
Size	Text	
Artist	Number	

Artist03		
Field Name	Туре	
ArtistID	Number	
Name	Text	
Location	Text	

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

3	Establish the following One-	-to-Many Relationships:	2.1.1
	Artist03.ArtistID	1∞ Sculpt03.Artist	2.1.2
	Mater03.ID	1∞ Sculpt03.Material	2.1.2
4		culptures where the <i>Description</i> contains the ils of these products, in ascending order of	3.1.1
	Date and ascending order of	•	3.2.1
			3.2.2
			5 1 1

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:		4.1.1
	 The header should include Inuit Gallery and today's date, ArtistID, Name and Location 	<u> </u>	4.1.2
	 The detail rows should show Ref, Substance, Colour, Description and Price 		4.1.3
	 Group the data by Date 		5.1.1
	 At the end of the report, show the total value of all the items. 		

Your report may look something like this:

Inuit Gallery 23 February 2002

Al	RTISTI	D 25809	<i>NAME</i>	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 <i>Description</i> 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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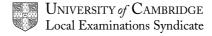
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[Turn over

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	Туре	
ItemCode	Number	
Price	Number, 2dp	
Item	Text	
Туре	Text	
Subtype	Text	
Packsize	Number	
ReorderLevel	Number	
InStock	Number	
Supplier	Text	

Dept03		
Field Name	Туре	
DeptCode	Number	
Name	Text	
Signatory	Text	
DeliverRoom	Text	
Phone	Text	

Order03	
Field Name	Туре
OrderNo	Number
Product	Number
Customer	Number
Date	Date
Quantity	Integer

3	Establish the following One-to-Many Relationships:	2.1.1	
	Dept03.DeptCode 1∞ Order03.Customer	2.1.2	
	Items03.ItemCode 1∞ Order03.Product	2.1.2	
	Do not enforce referential integrity in these relationships.		
4	Select only the details of Items where the supplier is Dud and the value for <i>Instock</i> is less than the value for <i>ReorderLevel</i> .	3.1.1 3.1.2 3.2.1	
	Print the details of these products in ascending order of <i>Type</i> and then in ascending order of <i>ItemCode</i> .	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:	4.1.1
	 The header should include Tawara Beach and today's date, <i>DeptCode</i>, <i>Name</i>, <i>Signatory</i> and <i>DeliverRoom</i> 	 4.1.2
	 The detail rows should show OrderNum, ItemCode, Item, Price and Quantity 	4.1.3
	 Group the data by Date 	5.1.1
	 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. 	

Your report may look something like this:

Tawara	Dagala
luwuru	Deuch

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 placed on: 08 December 2002

Order Item Code Item Paper Clips Large (Box of 1000)

Order placed on: 19 December 2002

Price Quantity 9.99

99

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

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 <i>Type</i> is Pens/Markers	4.1.1
8	Using this data create a cross-tab (pivot table) which shows <i>Type</i> as row labels and <i>Subtype</i> 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									
Туре	Clips	Erasers	Highlighter	Ink Jet Cartridge	Misc	Mounting Materials	Pads	Pencils	Pens
Pens/markers			999					99	999