Level 3 Designing and creating relational databases (7266/7267-047) e-Quals

www.cityandguilds.com/e-quals07
May 2011
Version 3.0

Assignment guide for Candidates

Assignment A

About City & Guilds

City & Guilds is the UK's leading provider of vocational qualifications, offering over 500 awards across a wide range of industries, and progressing from entry level to the highest levels of professional achievement. With over 8500 centres in 100 countries, City & Guilds is recognised by employers worldwide for providing qualifications that offer proof of the skills they need to get the job done.

City & Guilds Group

The City & Guilds Group includes City & Guilds, ILM (the Institute of Leadership & Management) which provides management qualifications, learning materials and membership services, NPTC which offers land-based qualifications and membership services, and HAB (the Hospitality Awarding Body). City & Guilds also manages the Engineering Council Examinations on behalf of the Engineering Council.

Equal opportunities

City & Guilds fully supports the principle of equal opportunities and we are committed to satisfying this principle in all our activities and published material. A copy of our equal opportunities policy statement is available on the City & Guilds website.

Copyright

The content of this document is, unless otherwise indicated, © City & Guilds Limited and may not be copied, reproduced or distributed without prior written consent.

However, approved City & Guilds centres and learners studying for City & Guilds qualifications may photocopy this document free of charge and/or include a locked PDF version of it on centre intranets on the following conditions:

- centre staff may copy the material only for the purpose of teaching learners working towards a City & Guilds qualification, or for internal administration purposes
- learners may copy the material only for their own use when working towards a City & Guilds qualification

The *Standard Copying Conditions* on the City & Guilds website also apply.

Please note: National Occupational Standards are not © City & Guilds Limited. Please check the conditions upon which they may be copied with the relevant Sector Skills Council.

Publications

City & Guilds publications are available on the City & Guilds website or from our Publications Sales department at the address below or by telephoning +44 (0)20 7294 2850 or faxing +44 (0)20 7294 3387.

Every effort has been made to ensure that the information contained in this publication is true and correct at time of publication. However, City & Guilds products and services are subject to continuous development and improvement, and the right is reserved to change products and services from time to time. City & Guilds cannot accept responsibility for any loss or damage arising from the use of information in this publication.

City & Guilds
1 Giltspur Street
London EC1A 9DD
T +44 (0)20 7294 2800
F +44 (0)20 7294 2400
www.cityandguilds.com
learnersupport@cityandguilds.com

Contents

Unit 047 – Designing and creating relational databases Level 3

Assignment A

Introduction – Information for Candidates	2
Candidate instructions	3

Level 3 Designing and creating relational databases (7266/7267-047) Assignment A

Introduction – Information for Candidates

About this document

This assignment comprises all of the assessment for Level 3 Designing and creating relational databases (7266/7267-047).

Health and safety

You are responsible for maintaining the safety of others as well as your own. You are asked to work safely at all times.

You will **not** be allowed to continue with an assignment if you compromise any of the Health and Safety requirements.

Time allowance

The recommended time allowance for this assignment is **two and a half hours**.

Level 3 Designing and creating relational databases (7266/7267-047) Candidate instructions

Time allowance: Two and a half hours.

The assignment:

This assignment is made up of **five** tasks

- Task A - Setup and database creation
- Task B - Create an input form
- Task C - Editing Databases and Undertaking Information Retrieval
- Task D - Undertaking Information Retrieval and developing Reports for Output

Scenario

You are consulting to a Health & Fitness Club. Your client has been using a paper system for all of their membership management. Part of your job role is to design the membership and facilities databases, test sample data and you have been asked to computerise the information retrieval using reports and queries.

You have been supplied with text files by the systems analyst containing all the necessary input data, including field headings and you must now create a relational database to store the membership information. You will need to use database facilities to retrieve and select accurate information from the database in various formats.
You will need to save your work in appropriately named files and folders and you will need to present the retrieved information in a suitable format so the systems analyst can check that the design fulfils the client requirements.

Read all of the instructions carefully and complete the tasks in the order given.

Task A – Setup and database creation

1 Create a new folder in your work area or on removable media with the name **HEALTH**.

Copy the **three** text files, provided by your assessor, to the **HEALTH** folder:

- **Members.txt**
- **Bookings.txt**
- **Categories.txt**.

Continued over…

2 Open a database application and create a new database in your **HEALTH** folder.

The filename should be **H&F1**- followed by your initials, for example **H&F1-JF**.

3 Import the data file **Members.txt** into a new table and name it **tblMembership**.

The data includes a header row, it is comma delimited, and text is enclosed in quotes (").

4 Carry out the following actions **for tblMembership**:

- Set the data type for the **Paid** field as **logical**.
- Set the field length for **MemberID** to length **7** .
- Set the **Postcode** field to length **8** .
- Set a primary key using **MemberID**.

5 Import the data file **Bookings.txt** into a table and name it **tblCourtBookings**.

The data includes a header row, it is comma delimited and text is enclosed in quotes (").

6 Carry out the following actions for **tblCourtBookings**:

- Set the **Court** field to **integer**.
- Set a joint primary key using **BookingNo** and **MemberID**.
- **BookingNo** should be an automatically generated number.

Validation of the data is required in the **tblCourtBookings**:

- Set up validation for the **Court** field that accepts only whole integers between **1** and **4** inclusive as valid entries.
- Set the default value as 0
- Set the validation message as: **Enter as a court number between 1 and 4 inclusive**.
- Set the Lookup for the court field to **List Box** with the **Row Source Type** as **Value List** and the **Row Source** as the values **1** to **4** inclusive.

7 Import the data file **Categories.txt** into a table and name it **tblMembershipCategories**.

The data includes a header row, it is comma delimited and text is enclosed in quotes (").

8 Carry out the following actions for **tblMembershipCategories**:

- Set the data type for the **AnnualFee** field as currency (to local symbol) to **2** decimal places.
- Set the **primary key** to **CategoryNo**.

Continued over…

9 Set suitable relationships between the tables:

- **tblMembership**,
- **tblCourtBookings**
- **tblMembershipCategories**

Backup your database at this point to **H&F1-xx-V1**

Task B – Create an input form

1 Create a data input form to allow users to input data to the **tblCourtBookings**.

The form needs to include all the fields from the **Court Bookings** table and the **Lname** and **Fname** from **Membership** table.

Edit the design of your form to reflect the lookup required on the **court** field. Save the form as **frmBookings**. Check that the same validation rule as the table works.

Adjust the size of the form header to allow the insertion of a heading on the form. Type the heading as **BOOKINGS** and format the heading to a 24 pt Sans Serif bold font with the font colour set to red.

In **tblCourtBookings** table set the properties for **MemberID**, **Date**, **Time** and **Day** to be an appropriate data type and field length ensuring that none of the original data is lost. Reflect your changes along with any input masks in **frmBookings**.

2 Make any necessary changes to the form design to improve the overall appearance.

Set all **labels** and **text boxes** to be a **12pt Sans Serif** font.

Set the label text colour to **blue** and **right align** the labels and associated text.

Ensure that **all** textural boxes are **left aligned**, numeric boxes are **right aligned** and **all** input boxes are set to the same height.

For dates and times create input masks and format all text to be capitalised.

3 Test **frmBookings** by entering the following data:

Court No.	**Member ID**	**Time**	**Date** (dd/mm/yyyy)
3	DS104	18:00	25/mm/yyyy
2	TA53	19:00	24/mm/yyyy
3	DE183	08:00	25/mm/yyyy
3	IH196	09:00	25/mm/yyyy
4	GS167	16:00	27/mm/yyyy
1	PM181	19:00	24/mm/yyyy

Where **mm/yyyy** is the current month and year. The day needs to be worked out according to the current month and year. Backup your database at this point to **H&F1-xx-V2**.

Continued over…

Task C - Editing Databases and Undertaking Information Retrieval

1 Create a query to show details of members whose renewal date is **less than** or **equal to 04/04/2008**, have **not** yet paid and whose interests include **Water Aerobics**.

Include all fields from the **tblMembership** and **tblMembershipCategories** in the query, delete any duplicate fields.

Save the query as **qryUnpaidMarch.**

2 Modify the query by inserting a column between the DOB field and the Interests field and add a calculated field called **Age as of 31/12/YYYY** to the design of **qryUnpaidMarch**.

Create an expression in the field **Age** that calculates the age as of 31/12/YYYY (Current Year) of each member by taking the DOB from the current date using a function.

Save the query as **qryUpnaidMarch-V2**.

3 Create a report in landscape form based on **qryUnpaidMarch-V2** with the centred heading **UNPAID WATER AEROBICS FEES FOR MARCH**.

Include only the following fields in the report (presented in columns in this order):

- **CategoryType**
- **Fname**, **Lname**
- **DOB**
- **Age as of 31/12/YYYY**
- **Interests**
- **RenewalDate**
- **Annual Fee**
- **Paid**

Make sure **all** information is fully displayed.

4 Group the report by **CategoryType** only, with the records in ascending order of **Lname**.

5 Add a field that calculates the **total** of the annual **fees for the members a**nd place it in the report footer. Align the amount under the **Annual Fee** column.

The label of the field needs to be **TOTAL FEES OWING**.

Format the values in the field as currency (local symbol) to 2 decimal places.

6 Using the same query, add a field that calculates the total number of members that have **not** yet paid and place it in the report footer, starting at the left margin.

The label of the field should be **Members that have not yet renewed their membership**.

Continued over…

7 In the report amend the field names **Fname** and **Lname** so that they read **First Name** and **Last Name**.

Amend all the other two word field headings so that there is a space between the two words.

8 Make the font size of the report footer 8 point and adjust the size of the boxes so that all the data is fully displayed.

Place **your name**, **today's date** in a page footer and save the report as **rptUnpaidMarch**.

Backup your database at this point to **H&F1-xx-V3**.

Task D - Undertaking Information Retrieval and developing Reports for Output

1 Create a query to show details of members who have a court booking on **25/MM/YYYY** or **26/MM/YYYY** in **Court 3**. Include all fields from the **tblMembership** and **tblCourtBookings** in the query.

Delete any duplicate fields from the second import table.

Save the query as **qryCourtClosure**.

2 Create a mailing label report based on **qryCourtClosure**.

The label size should be approximately **52 mm x 70 mm** and should fit **2 across** an **A4 portrait** page.

The font should be **12** point **sans serif** and the text should be **black**.

Fields to be included are:

- **Title**
- **First Name**
- **Last Name**
- **Address1**
- **Address2**
- **Address3**
- **Postcode**.

Add two blocks on the last lines showing **Day, Date** and **Time, Court**.

Title First Name Last Name Address1, Address2, Address3 Postcode. Day, Date Time and Court.

Continued over…

Sort the labels by **Last Name**.

Save the report as **rptLabelsCourtClosure**.

Backup your database at this point to **H&F1-xx-V4**.

4 Check your database, save **H&F1-xx** and exit the application.

When you have finished working:

- Sign each document above your name and label all removable storage media with your name.
- Hand all paperwork and removable storage media to your assessor.

If the assignment is taken over more than one period, all paperwork and removable media must be returned to the test supervisor at the end of each sitting.

End of assignment

Published by City & Guilds
1 Giltspur Street
London
EC1A 9DD
T +44 (0)20 7294 2468
F +44 (0)20 7294 2400
www.cityandguilds.com

City & Guilds is a company registered in England and Wales (company number 16513878)