

Access 2010: Building Access databases

Practical workbook

Aims and Learning Objectives

This course provides participants with the basic skills necessary to develop a simple Access 2010 database from a paper-based design.

The core learning objectives for this course are to:

- gain a simple overview of the core relational database concepts
- build a simple database from a paper-based design – to achieve this candidates will:
 - create tables and set relationships between tables
 - import pre-existing data and enter data manually
 - use the wizard to create and use data entry forms to simplify data input
 - base a form on a parameter query to view filtered data (if time allows)
 - add automation to a form using buttons and macros (if time allows)

Note on versions of Access:

- **Access 2013 users:** should have little problem using this document.
- **Access 2007 users:** should have few problems using this document if they keep in mind that the 2007 Office button has been replaced by a File tab in 2010 and that various command icons have moved, mostly to new locations within the same Ribbon tab.
- **Access 2003 users:** this document will be of little or no use.

Document information

Course files

This document and any associated practice files (if needed) are available on the web. To find these, go to <http://www.bristol.ac.uk/it-services/learning/resources> and in the **Keyword** box, type the document name.

Related documentation

Other related documents are available from the web at:

<http://www.bristol.ac.uk/it-services/learning/resources>



This document is licensed under a Creative Commons Attribution-Noncommercial-Share Alike 2.0 UK: England & Wales Licence (<http://creativecommons.org/licences/by-nc-sa/2.0/uk/>). Its “original author” is the University of Bristol which should be acknowledged as such in any derivative work.

Contents

Document information

Task 1	Course objectives	1
Task 2	Introduction to relational database concepts.....	2
Task 3	Create a new database file.....	4
Task 4	Create a table manually	5
Task 5	Create new tables automatically	6
Task 6	Fine-tune the Student and Subject tables.....	8
Task 7	Create relationships using two methods.....	10
Task 8	Create a dropdown list not based on a relationship.....	14
Task 9	Create a form and subform using Form Wizard	15
Task 10	Customise your form – basics	17
Task 11	Customise your form using the Property Sheet.....	22
Task 12	Add a calculation to a form.....	26
Task 13	Introducing automation	27
Task 14	Create a form that asks you what data you want to see.....	29
Appendix A	Setting a tabbed display	31

Important: security information

Data used on this course is fictitious. Remember that if you store or otherwise process personal or restricted University data on a database, you should be aware of your responsibilities toward keeping this data safe and secure, both from point of view of University regulations and the Data Protection Act.

See the Information security website (www.bristol.ac.uk/infosec) for further information.

Important: prerequisites

Before attending this course you must have attended "Access 2010: An introduction", or otherwise have experience of using Access.

Without this prior experience it is likely that you will not benefit from attending this course and will struggle to keep up with the brusque pace at which the course is run.

Task 1 Course objectives

Objectives To provide a 'road map' for the course.

Comments Generally speaking, the table creation tasks are covered during the morning and the data entry form creation tasks are covered during the afternoon.

What you should already know

Reminder of concepts introduced on the 'Access 2010: An introduction' course:

1. Tables hold the data and all other objects do something to or with this data, therefore, logically, tables must be built before other objects.
2. Tables are not the best environment for entering, modifying or deleting data, which is why we build data entry forms – to make data management easier.

Before we get started with development

We are going to:

1. Gain a basic overview of core relational design issues.
2. Discuss table design and introduce examples of good practice.

Table creation

We are going to (though not quite in this order):

1. Build a table and enter data manually.
2. Import pre-existing data from Excel and automatically create new tables.
3. Modify the above tables to ensure correct data types, field sizes and/or formats.
4. Import a table along with data from another Access database.
5. Add the required relationships and create dropdown lists.

Data entry form creation

We are going to:

1. Create a form and subform to let data be input into two tables at the same time.
2. Modify the form's appearance and modify the way we can interact with it.
3. Add a new field to the form to automatically calculate student age.
4. Create a form that asks you which data you want to view. (If we have time.)
5. Add buttons to make navigating between records easier. (If we have time.)

Task 2 Introduction to relational database concepts

Objectives To gain a basic overview of: how relational databases are designed; what the relationships between tables mean; where 'primary' and 'foreign' keys must be located for a design to be successfully built using Access.

Comments Relational database theory is a major topic, but the good news is that you don't need to understand relational theory to build working databases. There are some rules to follow and these rules work whatever the size or complexity of the database.

What is a relational database?

A relational database is made up of a set of tables, which are linked together by *relationships*. Each table holds data about one 'thing'. For example, the simple student database we will build has separate tables for the following:

- Student data
- The degree subjects that students can take
- The faculties to which students can belong
- The marks awarded to students

The reason for having separate tables is to prevent duplication and to make sure that data is uniformly held. As soon as you duplicate data, problems occur:

- You increase the risk of typing errors and of entering data in inconsistent ways
- You cannot be sure that search or sort results are accurate

By using separate tables for each distinct thing, you enter the data once and if you need to add it data again, you select it from a list. This prevents the above problems.

What does a simple relational database design look like?

This is the database we will build. The diagram below is called a Logical Data Structure (LDS) – also known as an Entity-Relationship (ER) diagram.

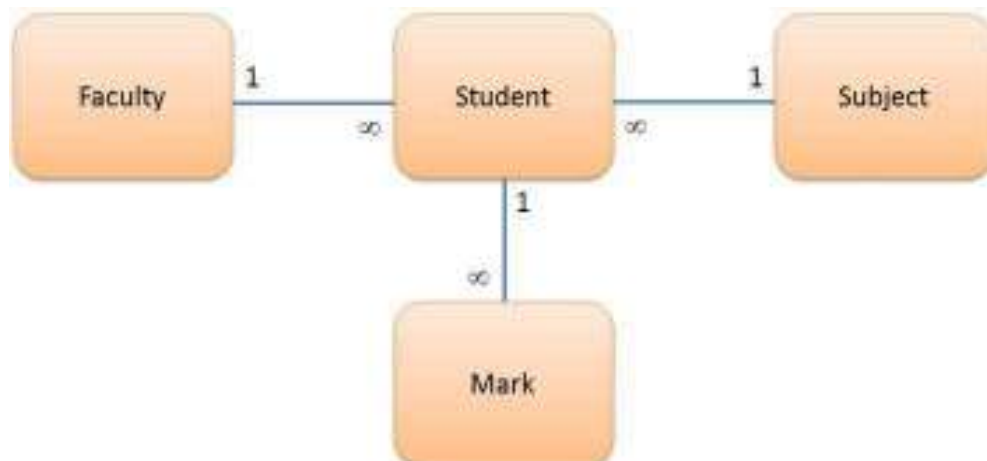


Figure 1 – LDS for four table database with three one-to-many relationships (the number of tables and the relationships between them will differ from database to database)

This is a sample, click download link to get the full Tutorial

CLICK BELOW

