

Database solutions

by Rutendo Gore

FILE	1046_RUTENDO_GORE_DATABASE_SOLUTIONS_114009_1107909345.DOCX		
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SUBMISSION ID	89031008	CHARACTER COUNT	4963

Rutendo Gore

P150317

Data management

Beverly Holland

Data management

Using Application software to develop business solutions

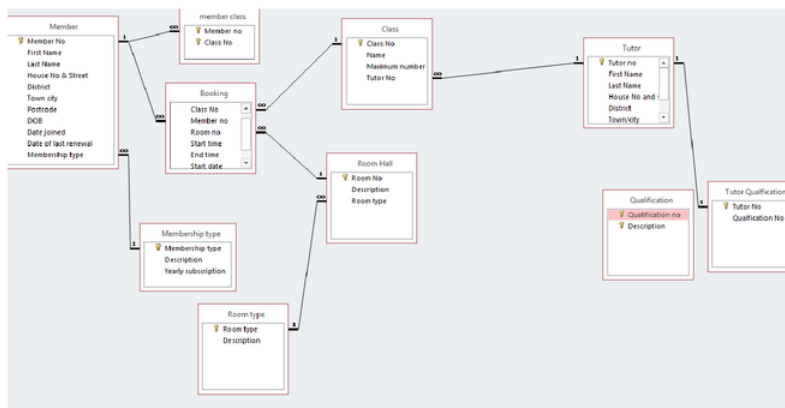
Introduction

To build a database for the requirements given by the sports centre, the database will be built from an image of entity relationship diagram given from the requirements specification. As part of the requirements specification the following aspects of the database are required in the specification. The database will require tables to keep the information regarding the Sports Centre, the database will also require forms to extract information from the database, it will also have queries to check for relevant information if they require to find out specific information. Reports will also be needed in the database as a requirement in the scenario.

An entity relationship diagram has been given in the scenario, and the relationships will be identified as a one to many relationship, or a many to many relationship providing the tables created. Macros will be created in the database for easy navigation to see the various tables relating to the database.

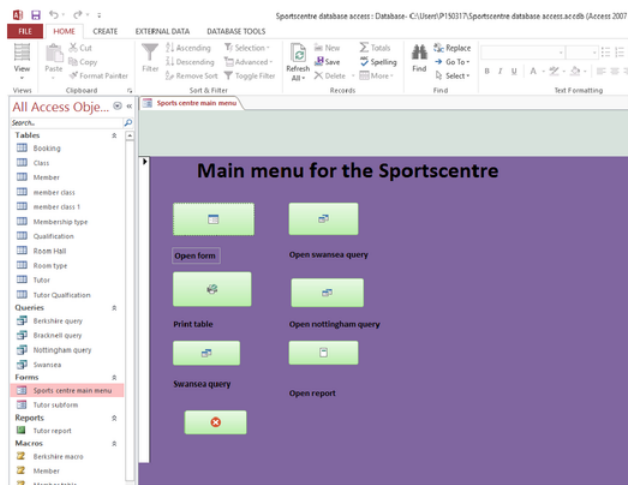
Relationship ERD

An entity relationship diagram is a graphical representation that presents the relationships presented in the database or to convey concepts in a system. The ERD is a technique that comes under data modelling which allows business processes to be defined for a foundation that can be used within relational databases. [1]



This screenshot shows the Entity relationship diagram for the sports centre database. The relationships shown are one to many and many to many relationships. As shown in the image above there are ten tables that make up the Sports centres database.

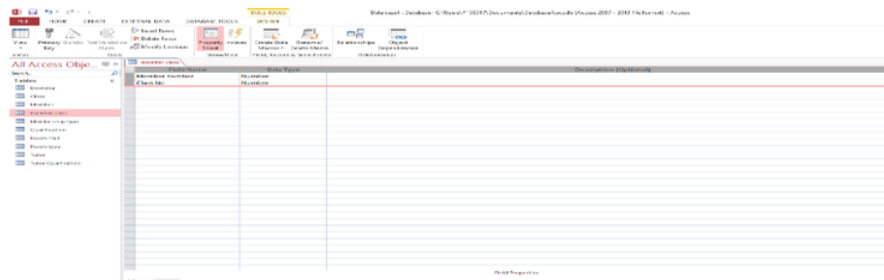
Sports centre database main menu



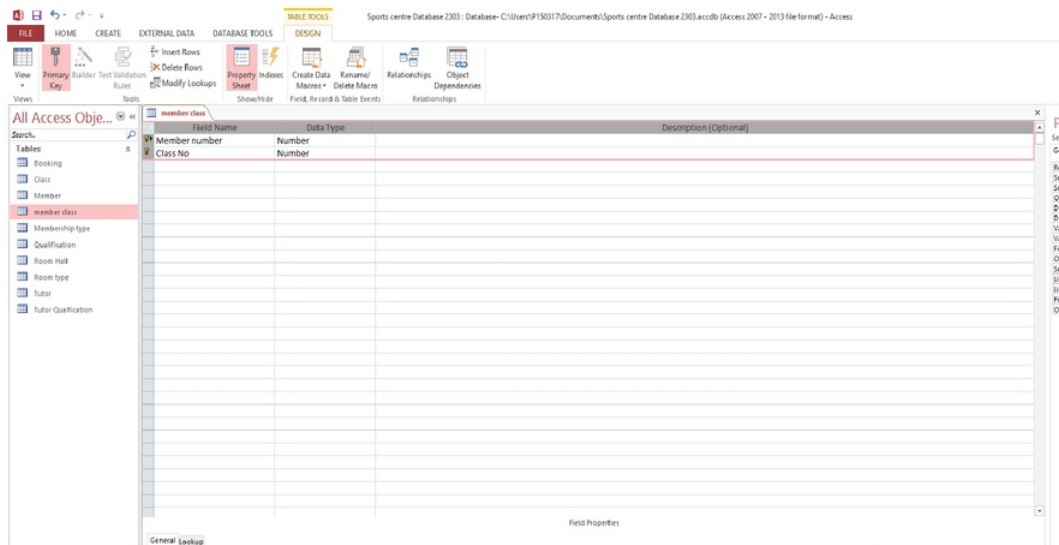
The above image is the main menu for the sports centre, the main menu has been made very simplistic for users who are not very technical. The main menu has various commands it operates. On the main menu for the Sports centre database there is an operation that allows you to open a form ,open specific queries , print a table within the database ,open a report and exit the entire application. The main menu has been designed with the end user in mind so that when they are using the application they will not find it hard to use.

Composite Key

A composite key relates to the operation of relational databases and it is when the combination of different columns in one table that are used to identify individual to each row in that specific table. [2]



The above screenshot shows two fields and their data types. The tables will be linked with a composite key so that it can identify itself in another table within the database. As presented the first screenshot does not have a composite key.



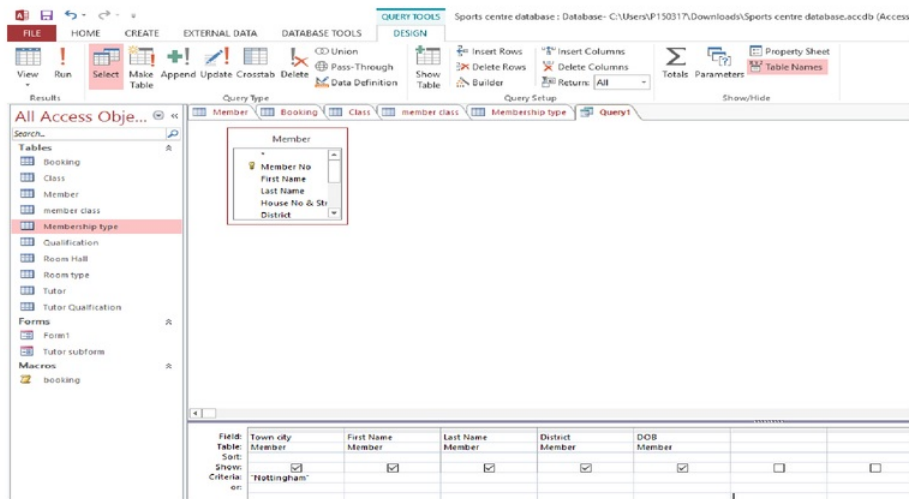
Tables with input data

Member No.	First Name	Last Name	House No & Street	District	Town city	Postcode	DOB	Date joined	Date of last	Membershi	Click to Add
1230	Laura	Neath	28 downmarsh avenue	west glamorgan	Swansea	SA2 1ER	120396				
1300	Joseph	Adams	43 Willows avenue	Berkshire	Slough	SL2 3NW	120296				
2345	Sandra	Jones	23 Beech Avenue	West Glamorgan	Ullansmet	SA7 1EW	120796				
2390	Luke	Seves	88 longeadle marsh	Southamptonshire	Southampton	SO12 1E4	120890				
2570	Samuel	Maxwell	52 Broadmarsh lane	West Glamorgan	Swansea	SA1 2DW	190296				
2806	Daniel	Yates	18 Lower avenue	Berkshire	Bracknell	RG40 2DW	190790				
3002	James	Dowley	72 Southampton road	Warwickshire	Coventry	CV12 1W2	240590				
3570	Amy	Daniels	37 redmarsh avenue	West Glamorgan	Ullansmet	SA7 4NG	251290				
4320	Kacey	Law	44 Dancy drive	Nottinghamshire	West Bridgford	NG5 1QW	270590				
4370	Ruth	Adamson	17 Burns Avenue	Nottinghamshire	Nottingham	NG3 1EE	230490				
4509	Jessie	downshire	65 newe avenue	Berkshire	Bracknell	RG40 2DZ	240801				
4560	John	Swansea	89 Keswick avenue	southamptonshire	southampton	SL2 0R2	180199				
5400	lauren	Matthews	78 bridge avenue	warickshire	Coventry	CV23 5SU	180304				
5678	Ralph	Niamvs	23 Answeil drive	Nottinghamshire	West Bridgford	NG5 8LU	120196				
7801	John	Adams	22 Winders lane	Berkshire	Slough	SL7 2CE	130401				
7809	Francesa	Addisson	84 Swansea Road	Southamptonshire	Southampton	SL9 3RZ	170901				
8000	Leon	Hampton	65 closemarsh	Nottinghamshire	Nottingham	NG4 2AE	181103				
9004	Matthew	Spimes	25 Ridgesway	Warickshire	Leamington sp	LA8 1EW	181201				
9870	Josie	Feayes	53 Broadlane	Nottinghamshire	Nottingham	NG8 9EW	140596				
1023	Rachel	cleaves	24 Neath close	West glamorgan	Swansea	SA2 3ER	180690				
7560	danny	Rovers	52 Brichgrove lane	Berkshire	Bracknell	RG42 1EW	120699				

This screenshots shows the member table which holds all the records of the people who attend the Sports centre , this table has different fields for every person , where they live and their date of birth.

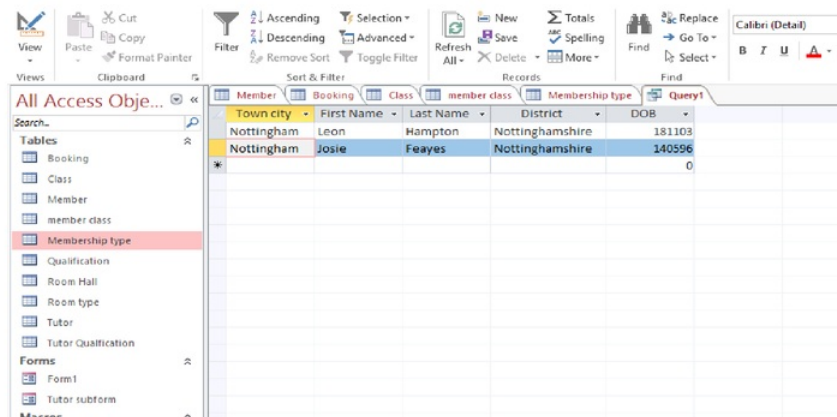
Queries

A query in a relational database is a way to get a particular piece of information. Within the sports Centre database the user might require a specific piece of information so a query will be performed to find that information.



This screenshot shows a query that will be performed on the database, the box is ticked in the query criteria to show and the criteria specified is Nottingham, all the records relating to the criteria Nottingham should show up, another screenshot will be provided to show that it has worked.

Result of the query being requested



This screenshot shows that the query has been performed with criteria provided and has produced an output of two results.

Tables in the database

Sports centre database: Database - C:\Users\F150317\Downloads\Sports centre database.accdb (Access 2007 - 2013 file format) - Access

Room Hall

Room No.	Description	Room type
1	gymnasium	small
2	oval shaped oval	medium
3	dark room	Average

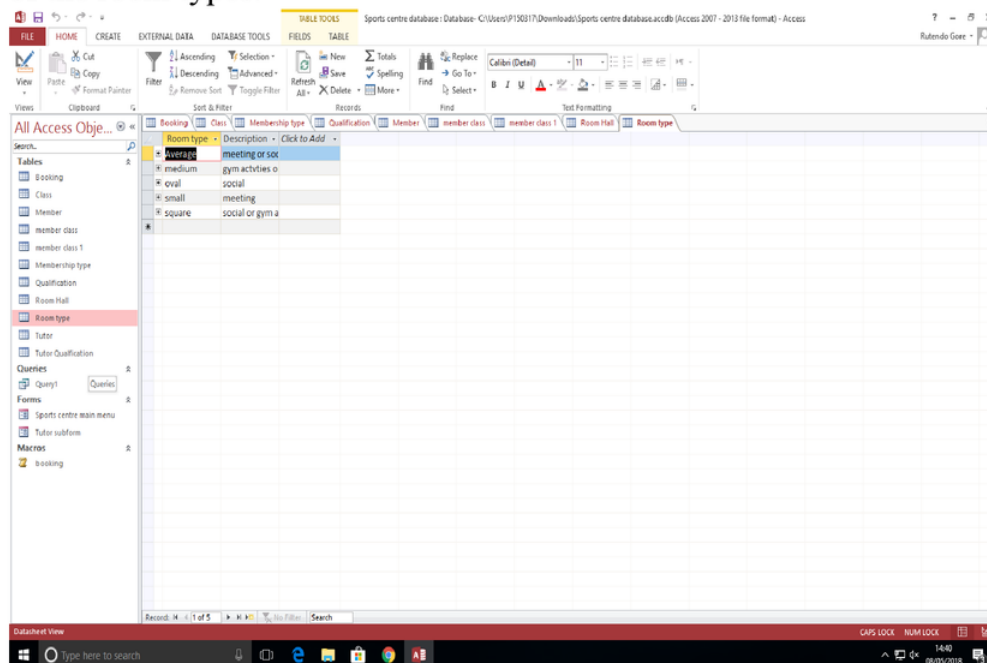
This screenshot above shows Room hall table which has the information about the room number ,description, and the room type.

Sports centre database: Database - C:\Users\F150317\Downloads\Sports centre database.accdb (Access 2007 - 2013 file format) - Access

Room type

Room type	Description
Average	meeting or social
medium	gym activities or social
oval	social
small	meeting
square	social or gym activities

This screenshot above is about the room types in the Sports centre , the table only has two fields which are ,room type and the description of the room types.



The screenshot below shows the tutor table ,this table holds information about the tutors that work at the Sports centre. The table has eight fields to hold information about the tutors.

Sports centre database: Database - C:\Users\P150317\Downloads\Sports centre database.accdb (Access 2007 - 2013 file format) - Access

Tables: Booking, Class, Member, member class, member class 1, Membership type, Qualification, Room Hall, Room type, Tutor, Tutor Qualification, Queries, Query1, Forms, Sports centre main menu, Tutor subform, Macros, booking

Tutor no.	First Name	Last Name	House No and street	District	Town/city	Postcode	DOB	Click to Add
1	Lucy	Eames	16 windsor way	Nottinghamsh	Nottingham	NG1 1WE	29041986	
2	Daniel	Windsor	17 Penrose drive	southampton	Southampton	SO2 0E4	30081993	
3	Nathan	White	20 Ridgeway	Berkshire	Bracknell	RG40 2DN	12071988	
4	Amanda	White	25 Lime marsh	Warwickshire	Coventry	CV3 3NW	15091987	
5	James	Mattes	30 Swansea avenue	West Glamorg	Llansmlet	SA7 1EE	19121980	
6								

Records: 6 of 6

The screenshot below shows the qualification table for the tutors , the table has two fields.

Sports centre database: Database - C:\Users\P150317\Downloads\Sports centre database.accdb (Access 2007 - 2013 file format) - Access

Tables: Booking, Class, Membership type, Qualification, Tutor Qualification, Queries, Query1, Forms, Sports centre main menu, Tutor subform, Macros, booking

Qualificatio	Description
zumba	lv1
Fitness	lv2
Aerobics	lv3
Lifting	lv4
dance	lv5
swimming	lv6

Records: 6 of 6

Queries

The screenshot shows the Microsoft Access interface with a query named 'Query1' open. The query results are displayed in a table with the following data:

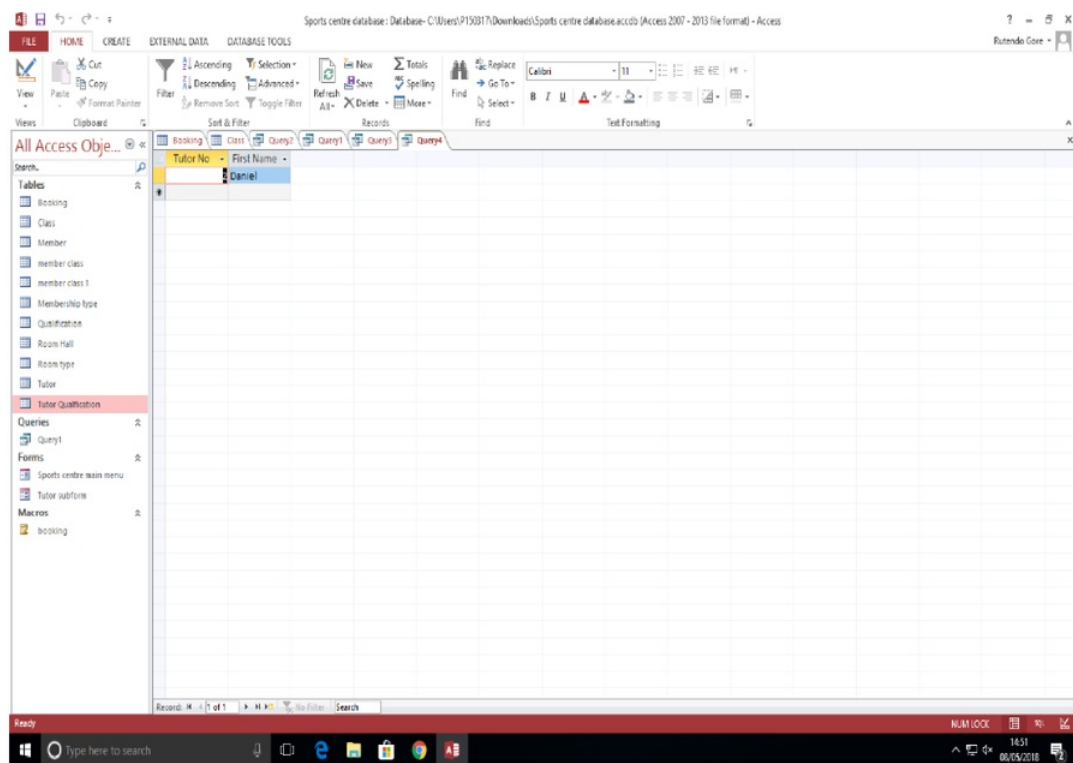
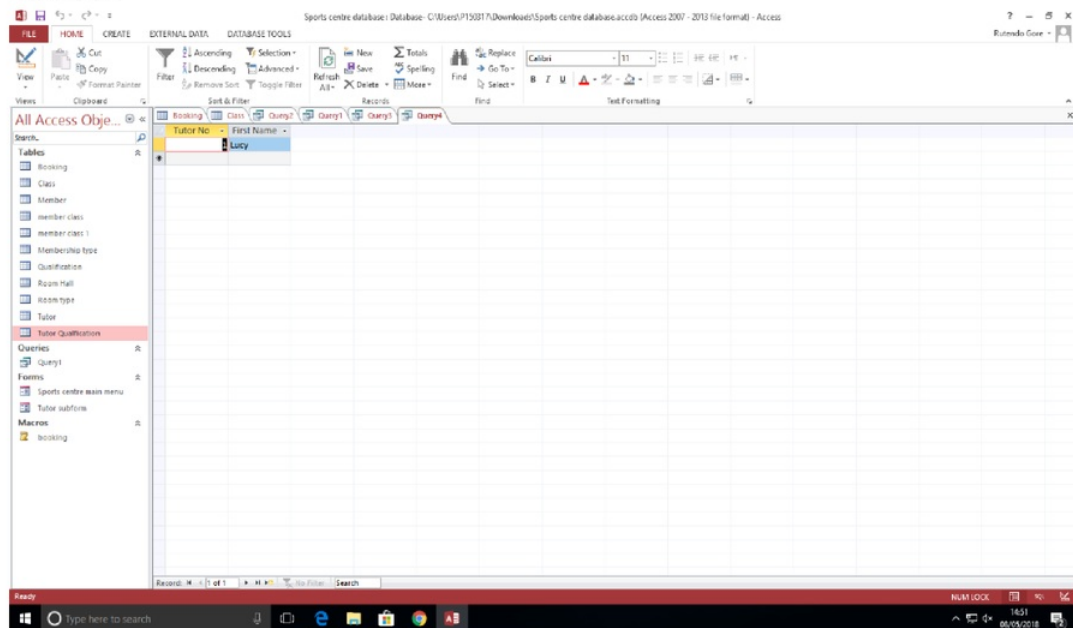
Member No	First Name	Last Name	Town City
100	Daniel	Yates	Bracknell
4205	Jessie	Downshire	Bracknell
7540	Sammy	Rovers	Bracknell

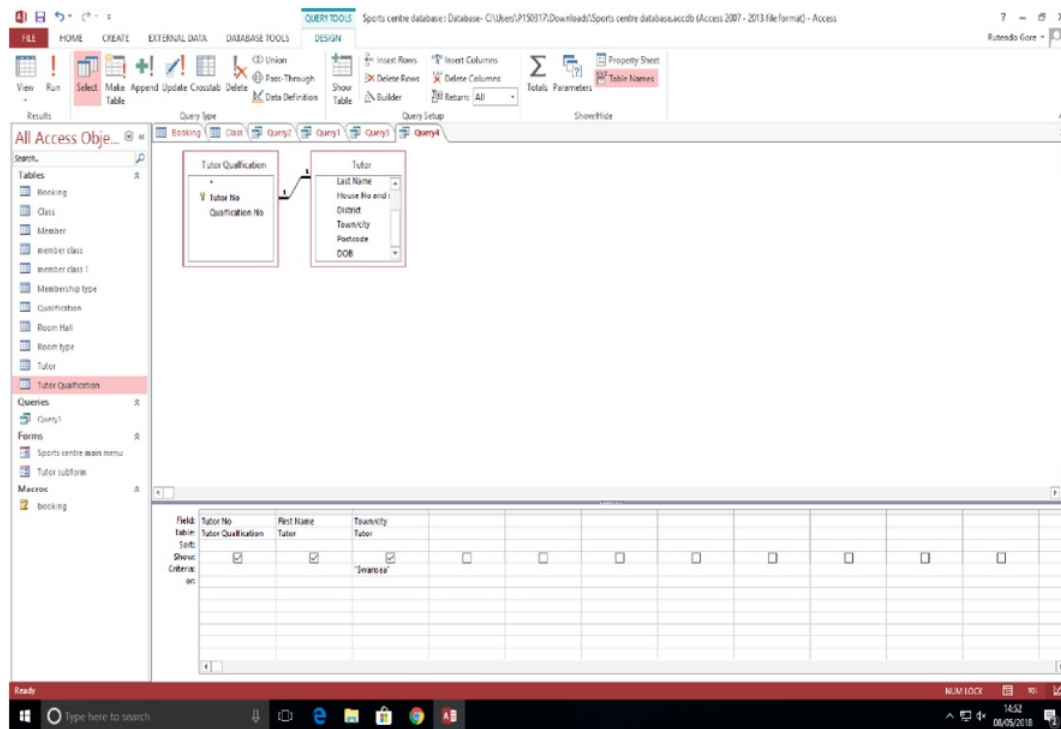
The left-hand pane shows the 'All Access Objects' list, and the top ribbon includes 'EXTERNAL DATA' and 'DATABASE TOOLS'.

The screenshot above shows the results of the Bracknell query. A query was performed to see which people live in Bracknell within the database. From the results provided, there are only three records shown which is correct.

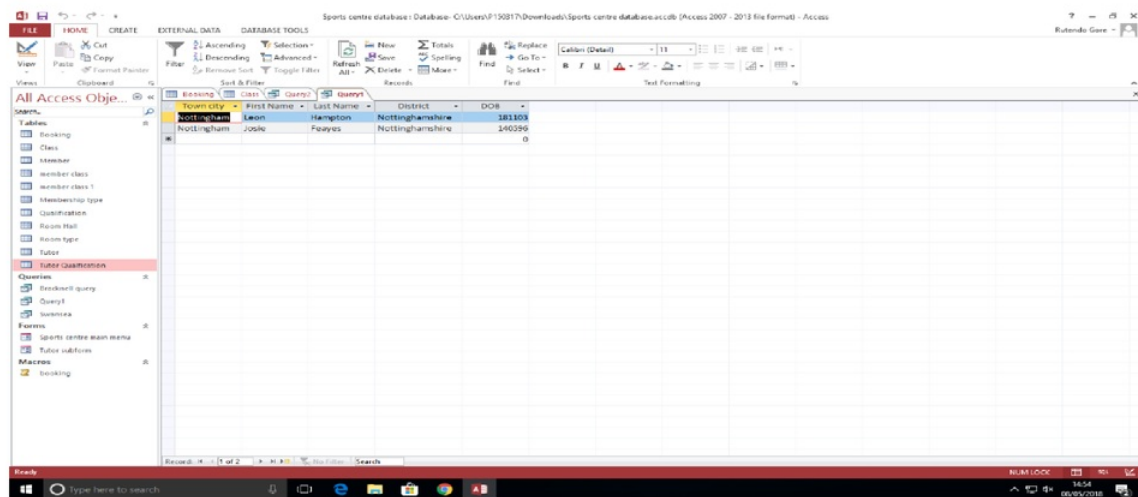
The screenshots below show two records from the tutor table, a query has been performed to identify the tutor's name and the tutor

number.

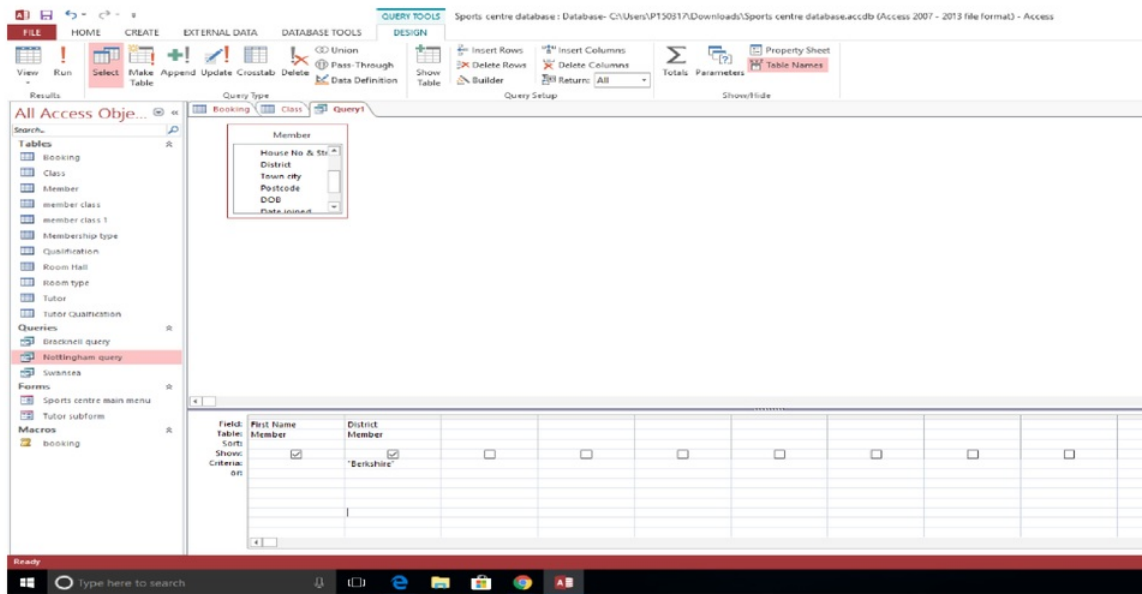




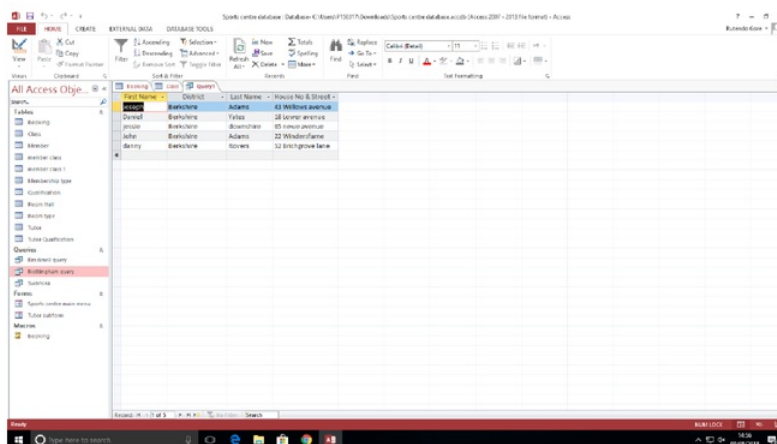
This screenshot shows a query being performed , the result of this query will be that there are no tutors in the Swansea area.



The above screenshot shows the query of the results of Nottingham. There are only two records.



The above screenshot shows a query being performed , the criteria provided is Berkshire , therefore when the query is run it will show results within the Berkshire district.



This screenshot shows the query result for the results in the Berkshire district.

Forms

The screenshots below show the forms for each individual tutors for the Sports centre database.

Microsoft Access - Sports centre database - Database - C:\Users\J15017\Documents\Sports centre database\accdb\Sports centre 2017 - 2018 file format - Access

Form: Tutor

Fields:

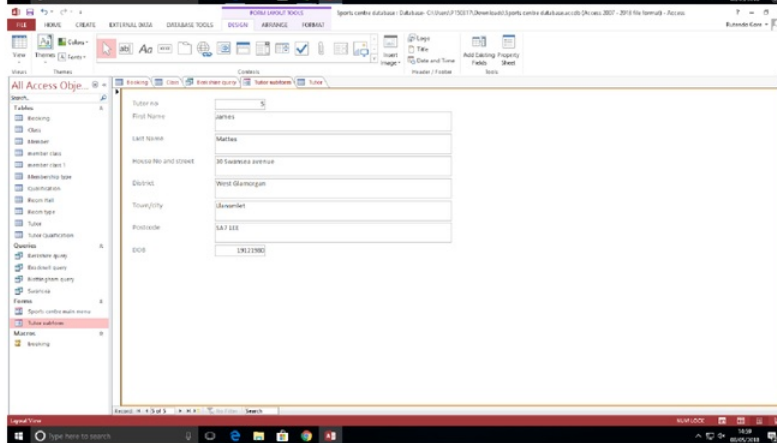
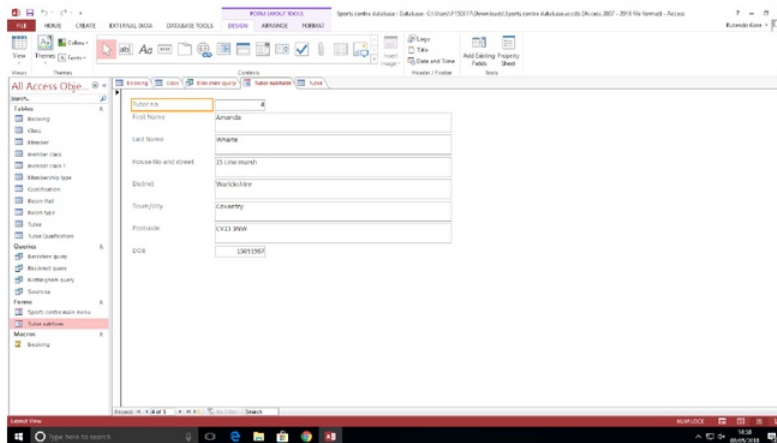
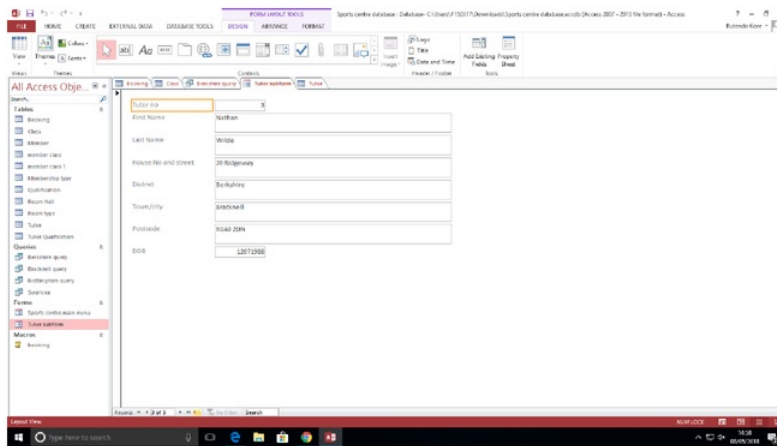
- Tutor ID: 1
- First Name: Jody
- Last Name: Carter
- Focus: 10 swimming
- Email: jodyswimming@bt.com
- Telephone: 01234 567890
- Postcode: W1A 1AA

Microsoft Access - Sports centre database - Database - C:\Users\J15017\Documents\Sports centre database\accdb\Sports centre 2017 - 2018 file format - Access

Form: Tutor

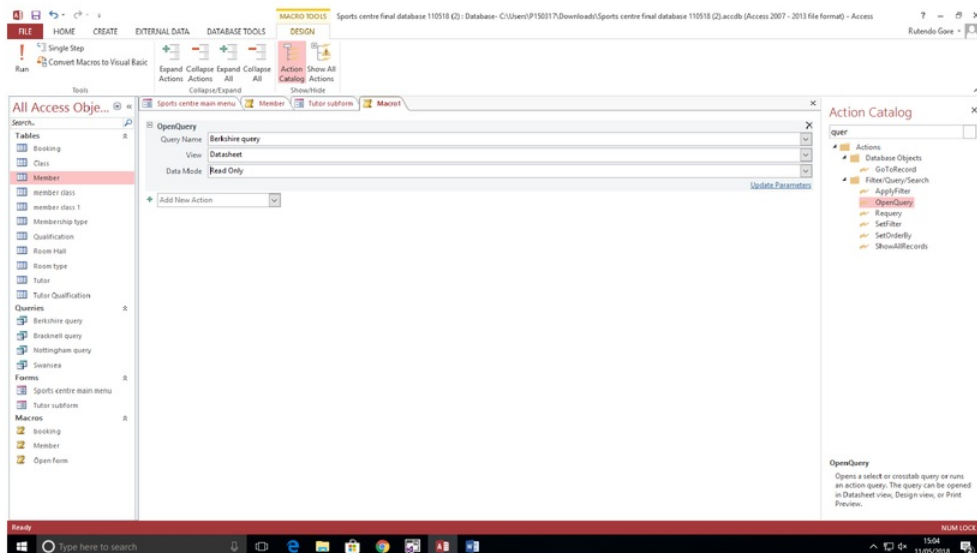
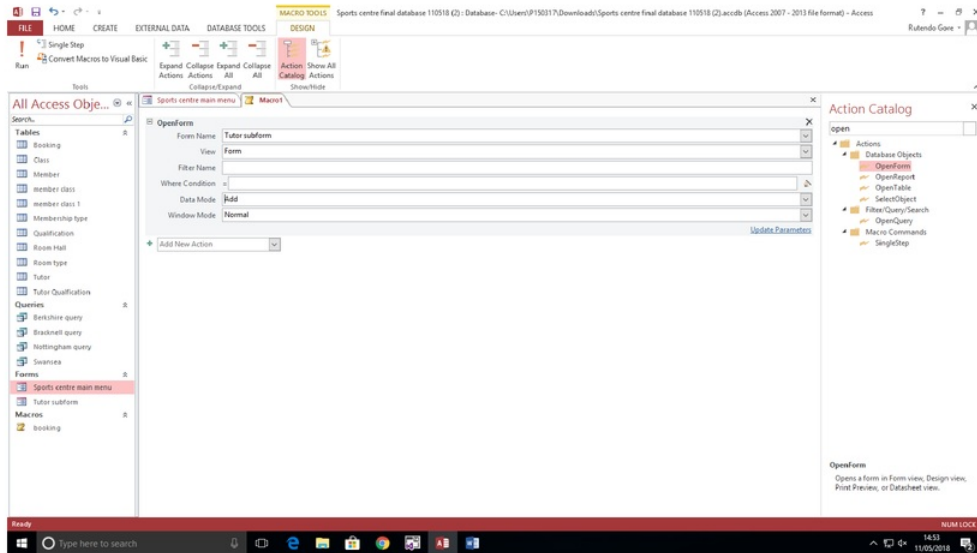
Fields:

- Tutor ID: 2
- First Name: David
- Last Name: Brown
- Focus: 11 Football
- Email: davidbrown@bt.com
- Telephone: 01234 567890
- Postcode: W1A 1AA

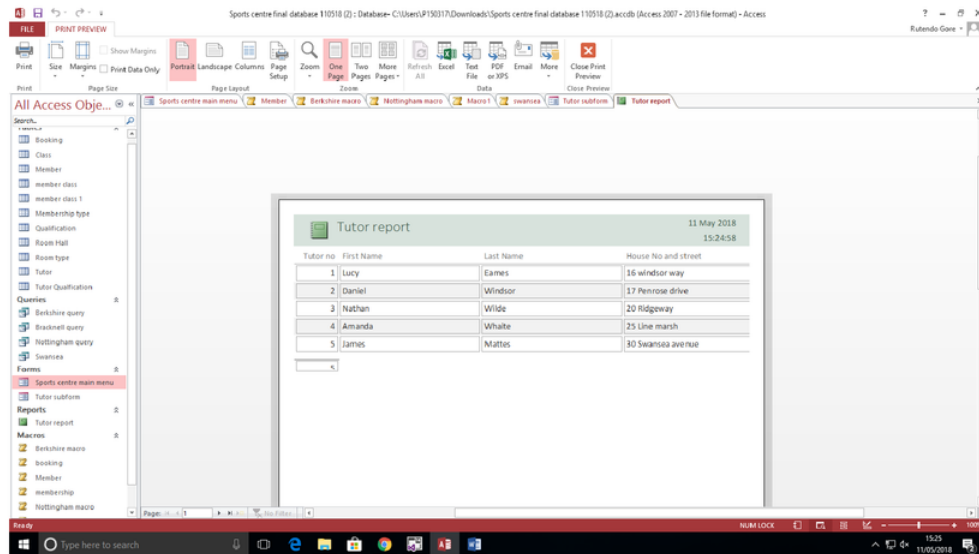


Macros

The screenshots below show about macros , a macro allows the users to open forms , close forms , exit the main menu , and other operations the users might want to put in the database.



Reports



This screenshot shows the report in print view , this is good for the user as they can see what the report looks like before they print it off.

This screenshot is the of the tutors report , the form has been extended so that the information can be seen clearer.

The screenshot shows the Microsoft Access interface with the 'Tutor report' form open. The form displays a table of tutor information. The table has the following columns: Tutor no, First Name, Last Name, House no and street, District, Town/city, Postcode, and DOB. The data is as follows:

Tutor no	First Name	Last Name	House no and street	District	Town/city	Postcode	DOB
1	Lucy	Eames	16 windsor way	Nottinghamshire	Nottingham	NG1 1WE	29041986
2	Daniel	Windsor	17 Penrose drive	Southampton	Southampton	SO2 0E4	30081993
3	Nathan	Wilde	20 Ridgeway	Berkshire	Bracknell	RG40 2DN	12071988
4	Amanda	Whaite	25 Line marsh	Warwickshire	Coventry	CV23 3NW	15091987
5	James	Mattes	30 Swansea avenue	West Glamorgan	Llanmillet	SA7 1EE	19121980

The report is dated 11 May 2018 at 15:30:00. The left pane shows the 'All Access Objects' list with 'Reports' expanded, highlighting 'Tutor report'.

Database solutions

GRADEMARK REPORT

FINAL GRADE

60/100

GENERAL COMMENTS

Instructor

Database schema correct however, the qualifications table is not linked to the system. You have explored building macros and use these to navigate through the system however they are somewhat simplistic stop therefore why not use the available mappers attached to buttons within the system.

No validation was added to the tables or input masks.

A good report and you never do demonstrate a good understanding of the process required that you have written this in your report. It also demonstrated a good understanding of the need for test data.

Analysis of systems requirements has been done to suitable level although you need to revisit tables to enhance the design. 17/25

You demonstrate a suitable understanding of the design principles however make sure all tables are linked together. 15/20

You have added some basic functionality of this to the system and explored the use of macros to help with database features 21/45

presented a well-written report 7/10 60

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