

LESSON

**CREATING A
DATABASE**

EDPM – GBSS EXTENSION

OBJECTIVES

- Explain the purpose of a database management system
- Create a database containing a single table
- Add data to a database table
- Perform a simple query

Database Management System

This is a software package designed to allow users to enter data as single items or as a list.

For example:

- Names
- Addresses
- Cell phone numbers
- Exam results
- Stock sold on various dates

Database Management System

This software package allow users:

- Create templates (blank record card)
- Import data from other sources
- Automatic calculations
- Sort and re-sort data
- Perform queries or search and filter
- Produce reports quickly

Database Software

A **database program** package
example:

- Microsoft Access

Features of presentation software

- Database – Set of related tables.

E.g. Tables

Students by
Form



Grades by
subject

These two tables contain same fields that can be linked.

- Tables- a database object used to store data about a particular subject. It contains records and fields.
- Record- a row within a table containing data.
- Fields- Columns within a database table
- Data type- the field property that indicates the type of data the field stores.

Features of presentation software

- Data type- the field property that indicates the type of data the field stores.

This includes:

- Text – short text or text and numbers without need for calculation.

e.g. telephone number

- Memo – lengthy text (text and numbers)

e.g. production description information

- Number – only numeric data used in calculations

e.g. a money value \$12000

Features of presentation software

- Data type- the field property that indicates the type of data the field stores.

This includes:

- Date/Time – date and time values
e.g. Tuesday, 05 November 2019
- Currency- money value and numeric data
e.g. Saturday, April 3, 2007 4/3/07
- Autonumber – unique sequential number
e.g. 001, 002, 003
- Yes/No – contain only one of two values
e.g. True or False
- Hyperlink – text or numbers used as a link
e.g. www.gov.gd

SETTING UP FIELD TYPES

Field Name	Data Type	
CUSTOMER_ID	AutoNumber	← Autonumber
FORENAME	Text	
SURNAME	Text	← Text
ADDRESS	Text	
TELEPHONE_NUMBER	Text	
DATE_OF_BIRTH	Date/Time	← Date/Time
NUMBER_OF_CHILDREN	Number	← Number
RECEIVE_MAIL	Yes/No	← Logical/ Boolean/ Yes/No

Creating a database

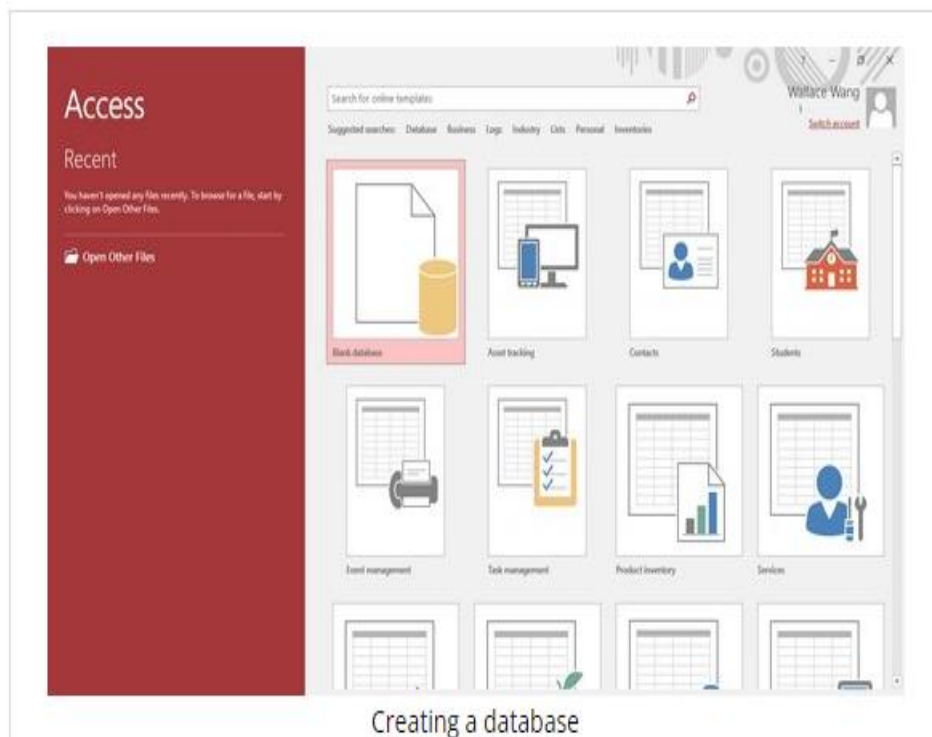
1. Open Microsoft Access program

You can now see the backstage view to create a new file, save, print and set options.

File format for access - .accdb (versions 2007 onwards)

2. Click on – Blank desktop database

3. Enter a name for the database select a location, and then select **Create**.



CREATING TABLES

TABLE – rows and columns

1. Open Access program
2. Click Create option, then Table
3. Open the table in design view
4. Type the name of the fields and the field type
E.G Last Name
5. Save your changes
6. Go to Datasheet view and add the information to your table

Creating queries

A query is a request for data results, for action on data, or both.

Using a query, you can:

- answer very specific questions about your data that would be difficult to answer by looking at table data directly.
- use queries to filter your data, to perform calculations with your data, and to summarize your data.

Creating queries

A query is a request for data results, for action on data, or both.

Using a query, you can:

- answer very specific questions about your data that would be difficult to answer by looking at table data directly. You can use queries to filter your data, to perform calculations with your data, and to summarize your data. You can also use queries to automate many data management tasks and to review changes in your data before you commit to those changes.

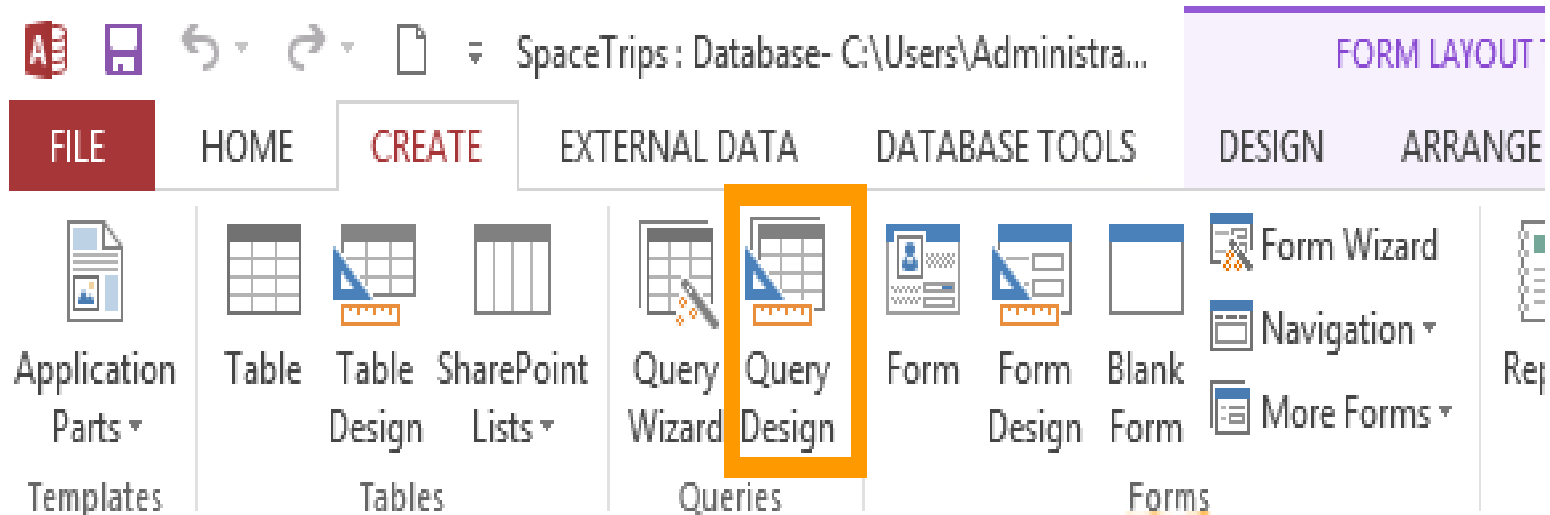
Types:

- Select query

Creating queries

1. Click the CREATE > Query Design button on the Ribbon.
2. Choose the tables to include in the query
3. Choose the fields to include, and adjust the criteria
4. Click the Run button (or just switch to Datasheet view)
5. Save query – right click on query tab, click save.

Creating queries



Click the Query Design button to create a query in Design view

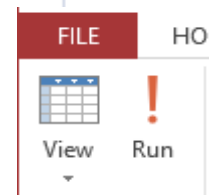
Creating queries

Query1

The diagram shows three tables: Customers, Orders, and Products. Customers has fields CustomerId (primary key), FirstName, LastName, and DateCreated. Orders has fields OrderId (primary key), CustomerId, ProductId, and DateCreated. Products has fields ProductId (primary key), ProductName, Price, and DateCreated. Relationships are shown as 1:∞ between Customers and Orders, and 1:∞ between Orders and Products.

Field:	CustomerId	FirstName	LastName	ProductName	Price
Table:	Customers	Customers	Customers	Products	Products
Sort:					
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:					
or:					

Clicking the Run button will run the query.
Clicking the Datasheet view button next to it will also run the query.



Creating queries

Field:	CustomerId	FirstName	LastName	Price
Table:	Customers	Customers	Customers	Products
Total:	Group By	Group By	Group By	Sum
Sort:				Descending
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:				> 80000
or:				