

Unit 1: Handling Database

Task 1: Structured Information



Table Relationship

A relationship is a connection that relates data in two different tables based on a common field, allowing you to combine and manage information more effectively. By doing this, you can perform queries and extract specific data from multiple tables all at once, prevent errors like creating an order for a non-existent customer, avoid data duplication, and retrieve specific information. You can create a relationship by joining the primary key field from one table to a foreign key field in another table. There are 3 type of relationship:

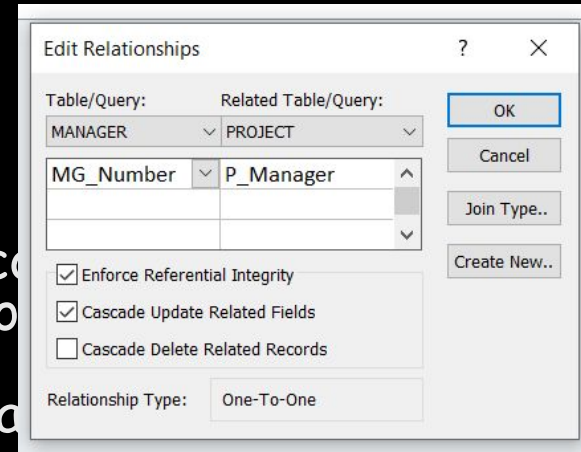
- One-to-one: each record in one table has at most one related record in another table.
- One-to-many: a record in Table A can have many matching records in Table B, but a record in Table B has only one matching record in Table A.
- Many to Many: A record in Table A can have many matching records in Table B, and a record in Table B can have many matching records in Table A.

To create relationships between tables:

- Database Tools tab, Relationship group, click Relationship
- In the Show table, select all tables then click add
- Now you can drop fields from a table to the same, relative fields in another table
- Click OK in Edit relationships window

These are how you can manage data in a Relationship:

- Enforce referential integrity: prevent orphan records - records that reference other records that no longer exist.
- Cascade Delete Related Fields: automatically update all fields that reference the primary key if any primary key is updated.
- Cascade Delete Related Records: automatically deletes all records that reference the primary key once its record is deleted.



Task 3 Queries



Queries in Access is a database object that allows you to retrieve specific data from one or more tables based on set criteria. It asks questions about your data to extract relevant information, which can include filtering, sorting, calculations, and combining data from multiple tables to display a customized result without looking through every record. To create a query, go to:

- Create tab, Queries group, Click queries design
- Select the tables you want
- Double click the fields of each table you want
- Click Run on Design tab

Before adding criteria, you must know what you want to find, filter or sort. Look through the fields you want to filter to understand what is each field's data types. What does each fields represent, contain or store? What information is in each of those field?

To add criteria, go on:

- Query Design view, locate the column you want
- In the criteria row, type the information you want find in quotation marks
- Click Run. The result will show only the records that hold that value

Don't forget to save your queries.

Queries criteria in Access

Simple criteria for all data types:

Equals	" x "	Searches for values equal to x
Does Not Equal	Not in (" x ")	Searches for all values except those equal to x
Null	Is Null	Searches for empty fields
Not Null	Is Not Null	Searches for non-empty fields

Simple criteria for text:



Criteria	Name	Write it like...	Function
Contains		Like <code>"*x*"</code>	Searches for all values that contain <code>x</code>
Does Not Contain		Not like <code>"*x*"</code>	Searches for all values except those that contain <code>x</code>
Begins with		Like <code>"x*"</code>	Searches for all values beginning with <code>x</code>
Ends with		Like <code>"*x"</code>	Searches for all values ending with <code>x</code>
Comes After		<code>>= "x"</code>	Searches for all values that come after <code>x</code> in alphabetical order.
Comes Before		<code><= "x"</code>	Searches for all values that come before <code>x</code> in alphabetical order.

Task 4 Report

If you need to share information from your database with someone but don't want that person actually working with your database, consider creating a report. Reports allow you to organize and present your data in a reader-friendly, visually appealing format. There are several ways to create reports in Access, they're listed in this table.

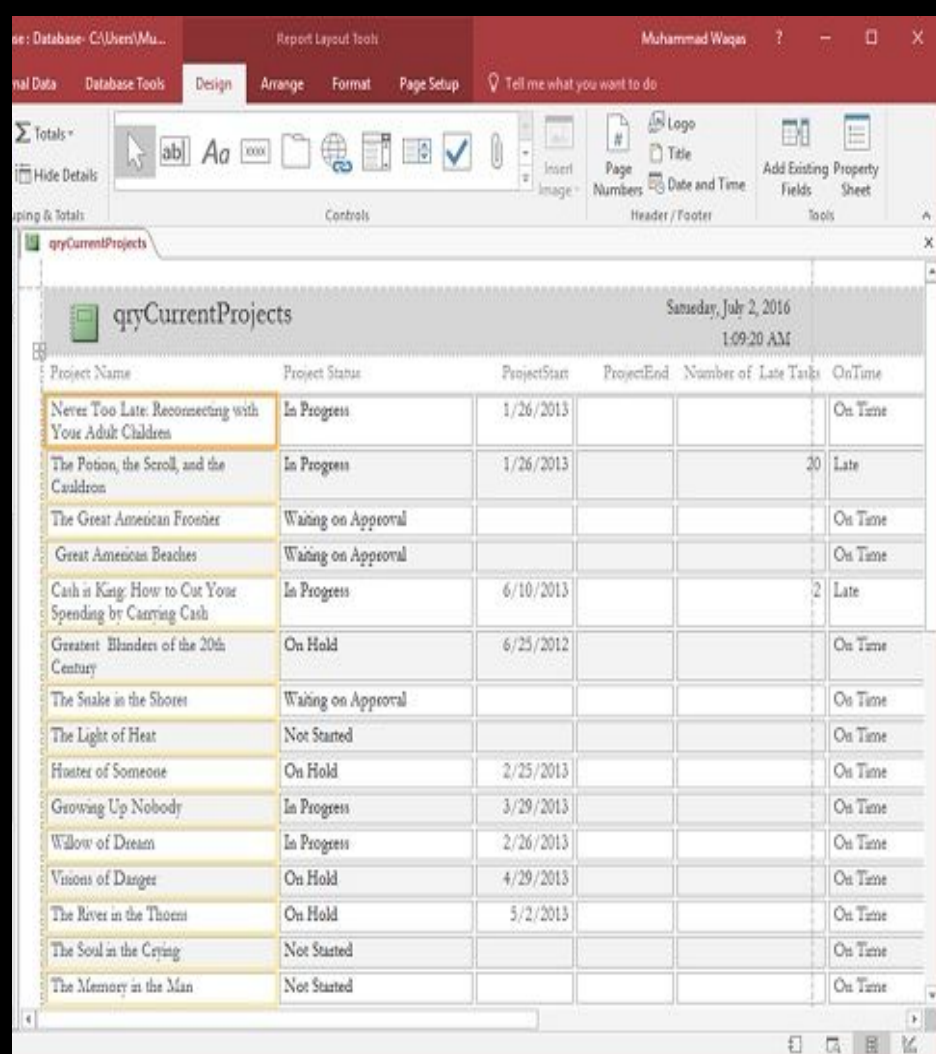


Report	Creates a basic report of the data in the current table or query. You can then add features, such as groups and totals.
Report Design	Creates a new blank report in Design view, where you can make more advanced changes to the report.

- Select the Create tab on the Ribbon. Locate the Reports group, then click the Report command.
- Click the Save button.
- Give the report a name and click OK.



It's likely that some of your data will be located on the other side of the page break. To fix this, resize your fields. Simply select a field, then click and drag its edge until the field is the desired size. Repeat with additional fields until all of your fields fit.



Microsoft Access window showing the 'qryCurrentProjects' table. The table has the following columns: Project Name, Project Status, ProjectStart, ProjectEnd, Number of Late Tasks, and OnTime. The data is as follows:

Project Name	Project Status	ProjectStart	ProjectEnd	Number of Late Tasks	OnTime
Never Too Late: Reconnecting with Your Adult Children	In Progress	1/26/2013			On Time
The Potion, the Scroll, and the Cauldron	In Progress	1/26/2013		20	Late
The Great American Frontier	Waiting on Approval				On Time
Great American Beaches	Waiting on Approval				On Time
Cash is King: How to Cut Your Spending by Carrying Cash	In Progress	6/10/2013		2	Late
Greatest Blanders of the 20th Century	On Hold	6/25/2012			On Time
The Snake in the Shores	Waiting on Approval				On Time
The Light of Heat	Not Started				On Time
Hunter of Someone	On Hold	2/25/2013			On Time
Growing Up Nobody	In Progress	3/29/2013			On Time
Willow of Dream	In Progress	2/26/2013			On Time
Visions of Danger	On Hold	4/29/2013			On Time
The River in the Thorns	On Hold	5/2/2013			On Time
The Soul in the Crying	Not Started				On Time
The Memory in the Man	Not Started				On Time