

Creating a prototype: using ODBC and Microsoft Access

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Steps in short

1. Install the correct ODBC driver, e.g.

- [MySQL ODBC driver](#)
- [PostgreSQL ODBC driver](#) (for Windows)
- [Connectors/odbc/connector-odbc-3.0.8/ - MariaDB](#)

Note: install either 32-bit or 64-bit version (depending on your app)!

2. Create an empty app and import tables by using ODBC

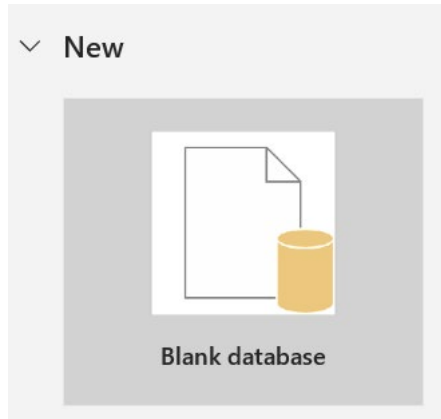
3. Create relationships (not mandatory)

4. Create forms



Open MS Access and create an empty database

... and then click External > ODBC Database

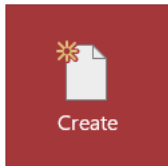
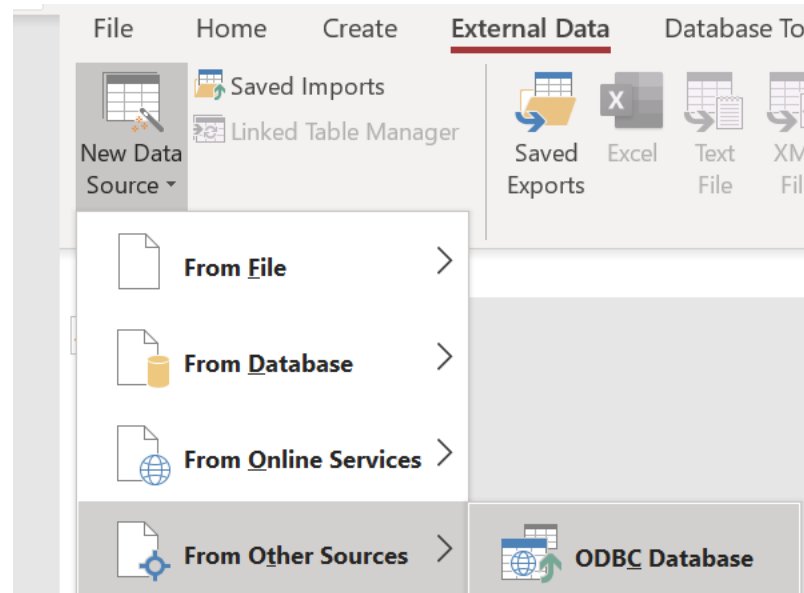


Blank database

File Name

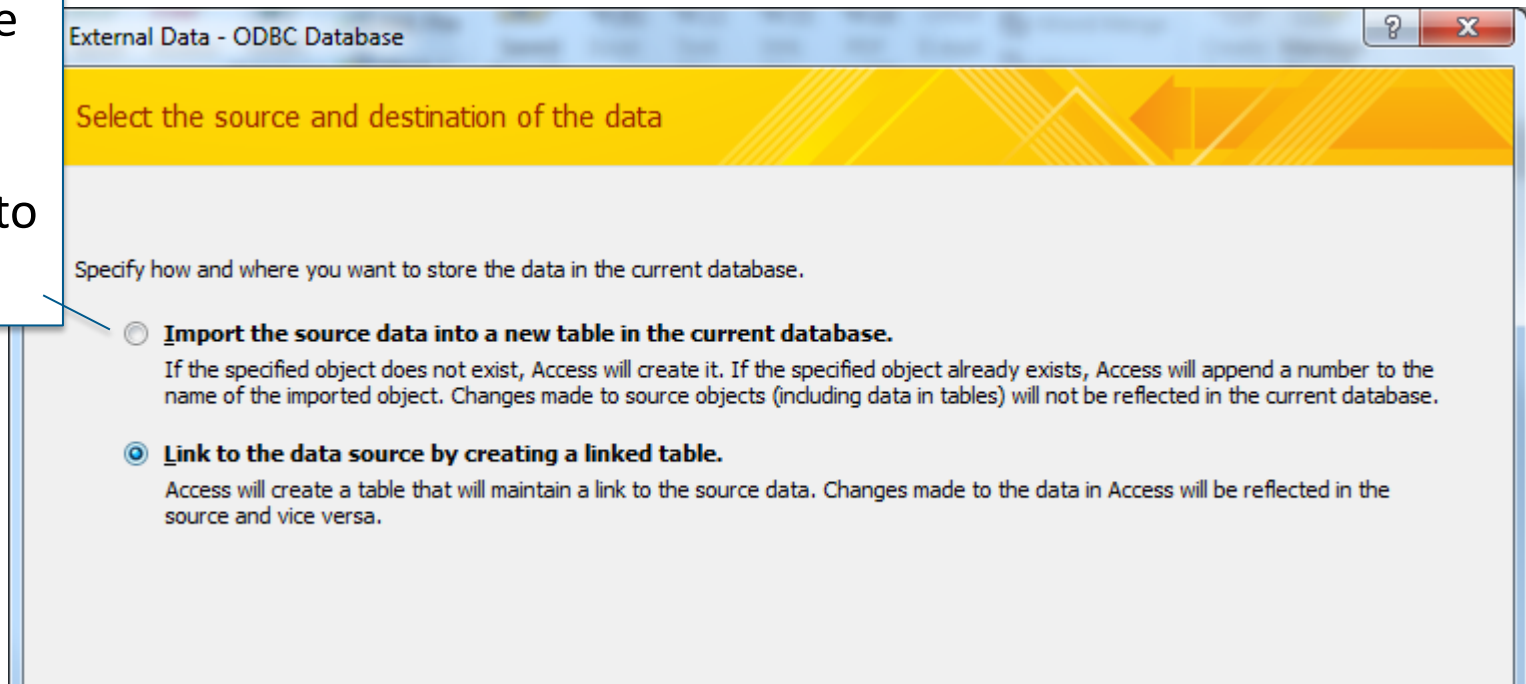
MyDB_prototype|accdb

C:\Users\huojo\OneDrive - JAMK\Documents\



Create an ODBC connection to the actual database

Enables creating the prototype without connection to live DB



Select Data Source


File Data Source Machine Data Source

Data Source Name	Type	Description
Excel Files	User	
MS Access Database	User	
MySQL testi	User	
MySQL-test	User	Kokeilua
MySQL-testausta	User	
PROJ_HENK	User	Ari Hovin esimerkkietokanta
TOP	User	Todennettujen osajärjestelmien...

New...

A Machine Data Source is specific to this machine, and cannot be shared. "User" data sources are specific to a user on this machine. "System" data sources can be used by all users on this machine, or by a system-wide service.

ODBC System DSN Warning

 You are logged on with non-Administrative privileges. System DSNs could not be created or modified

OK

Create New Data Source

Select a driver for which you want to set up a data source.

Name
Microsoft Access dBASE Driver (*.dbf, *.ndx, *.mdx)
Microsoft Access Driver (*.mdb, *.accdb)
Microsoft Access Text Driver (*.txt, *.csv)
Microsoft Excel Driver (*.xls, *.xlsx, *.xlsm, *.xlsb)
MySQL ODBC 5.3 ANSI Driver
MySQL ODBC 5.3 Unicode Driver
MySQL ODBC 8.0 ANSI Driver
MySQL ODBC 8.0 Unicode Driver

Advanced...

< Back Next > Cancel

Note: Unicode is usually better but in Labranet currently only ANSI driver works


Create New Data Source

When you click Finish, you will create the data source which you have just configured. The driver may prompt you for more information.

User Data Source
Driver: MySQL ODBC 5.3 Unicode Driver

< Back Finish Cancel

MySQL Connector/ODBC Data Source Configuration



Connection Parameters

Data Source Name:

Description:

TCP/IP Server: Port:

Named Pipe:

User:

Password:

Database:

Link Tables

Tables

- dept
- emps
- sdept

Save password

Select Unique Record Identifier

Fields in table 'sdept':

- DEPT
- MANAGER
- CODE

To ensure data integrity and to update records, you must choose a field or fields that uniquely identify each record. Select up to ten fields.

Views

Primary Key

Builder Test Validation Rules

Insert Rows Delete Rows Modify Lookups

Property Indexes Sheet

Show/Hide

All Acc...

Search...

- Tables
- address
 - city
 - country
 - customer
 - store

Field Name	Data Type
city_id	Number
city	Short Text
country_id	Number

General		Lookup	
Field Size	Integer		
Format			
Decimal Places	Auto		
Input Mask			
Caption			
Default Value			
Validation Rule			
Validation Text			
Required	Yes		
Indexed	Yes (No Duplicates)		
Text Align	General		

Tip: the values for foreign keys can be chosen easily by defining a lookup field

Open each table in design view and define the primary key

Field Name	
city_id	
city	
country_id	

General		Lookup	
Display Control	Combo Box		
Row Source Type	Table/Query		
Row Source	country		
Bound Column	1		
Column Count	2		
Column Heads	No		
Column Widths	0cm		
List Rows	16		
List Width	Auto		
Limit To List	Yes		



Database tools > relationships

- Choose tables

The screenshot shows the Microsoft Access Relationships view for a database named 'MyDB_prototype'. The interface includes a ribbon with tabs for File, Home, Create, External Data, Database Tools, and Help. The Design tab is active, showing options for Refresh, Save, Delete, and More. The Relationships view displays five tables: country, city, address, customer, and store. The 'Add Tables' pane on the right lists the tables available for selection, with 'store' currently selected.

Relationships

country

- country_id
- country
- last_update

city

- city_id
- city
- country_id
- last_update

address

- address_id
- address
- address2
- district
- city_id
- postal_code
- phone
- last_update

customer

- customer_id
- store_id
- first_name
- last_name
- email
- address_id

store

- store_id
- manager_sta
- address_id
- last_update

Add Tables

Tables Links Queries All

Search

- address
- city
- country
- customer
- store

Add Selected Tables

Drag line from the primary key to the foreign key

The screenshot shows the Microsoft Access interface with the 'Relationships' window open. The 'country' table is highlighted in the 'Tables' list, and its primary key 'country_id' is highlighted in the 'country' table view. The 'city' table is also visible, with its foreign key 'country_id' highlighted. The 'Edit Relationships' dialog box is open, showing the relationship between 'country' and 'city' tables. The 'Table/Query' is 'country' and the 'Related Table/Query' is 'city'. The primary key 'country_id' is linked to the foreign key 'country_id'. The 'Relationship Type' is 'One-To-Many'. The 'Enforce Referential Integrity' checkbox is checked. The 'Create New..' button is highlighted.

Tables

- address
- city
- country
- customer
- store

country

- country_id
- country
- last_update

city

- city_id
- city
- country_id
- last_update

Edit Relationships

Table/Query: country Related Table/Query: city

country_id country_id

Enforce Referential Integrity

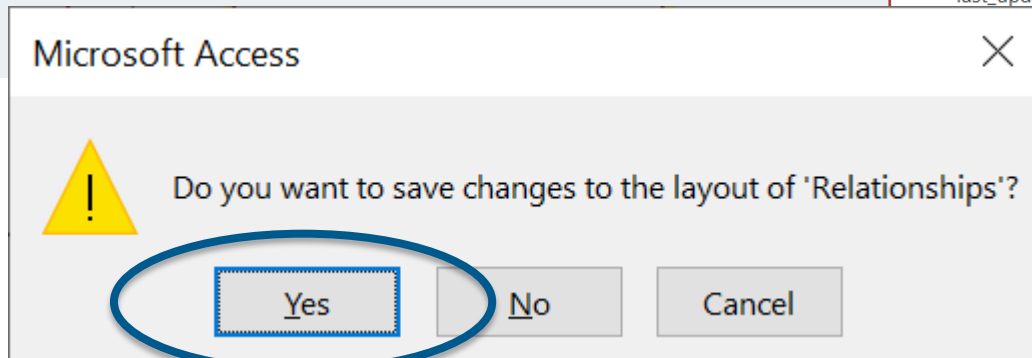
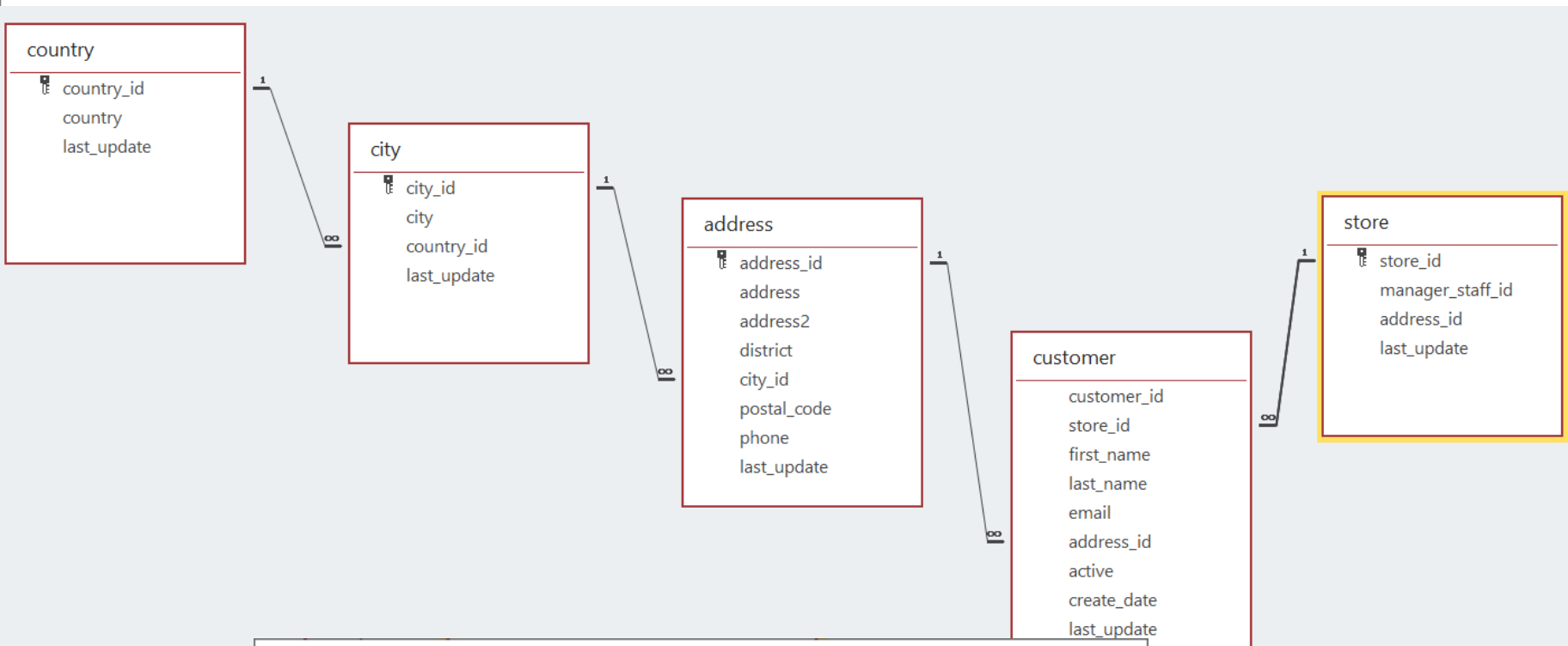
Cascade Update Related Fields

Cascade Delete Related Records

Relationship Type: One-To-Many

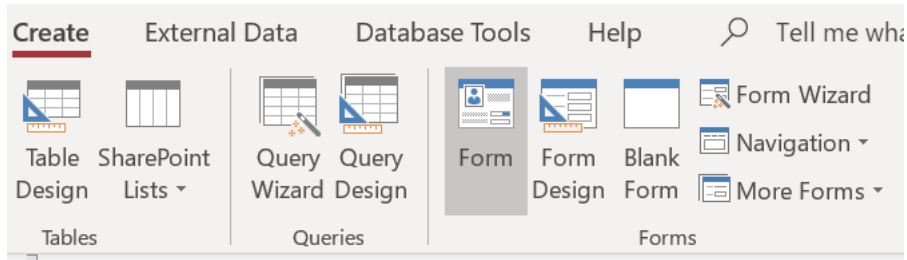
Create Cancel Join Type.. Create New..

Result



Create Form

- Choose Parent table and click Create > Form



Automatic connection

- Access connects the child table automatically to the parent by using the defined keys
- You can start testing your solution by adding data in the Form View

The screenshot displays the Microsoft Access interface. The ribbon at the top includes 'File', 'Home', 'Create', 'External Data', 'Database Tools', 'Help', and 'Design'. The 'Design' ribbon is active, showing a 'country' table with fields: 'country_id', 'country', and 'last_update'. A dropdown menu is open over the 'View' button, showing 'Form View', 'Layout View', and 'Design View'. The 'country' table is selected in the table list on the left.