



Information System Management

Chapter Five – Part 3: Microsoft Access

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HOW DO I BUILD A DATABASE?

Once the **E-R model** is built, it is used as a **blueprint** to build the real **database**

Translate (take) the model and use it as the 'instruction manual' to build the database.



HOW DO I BUILD A DATABASE?

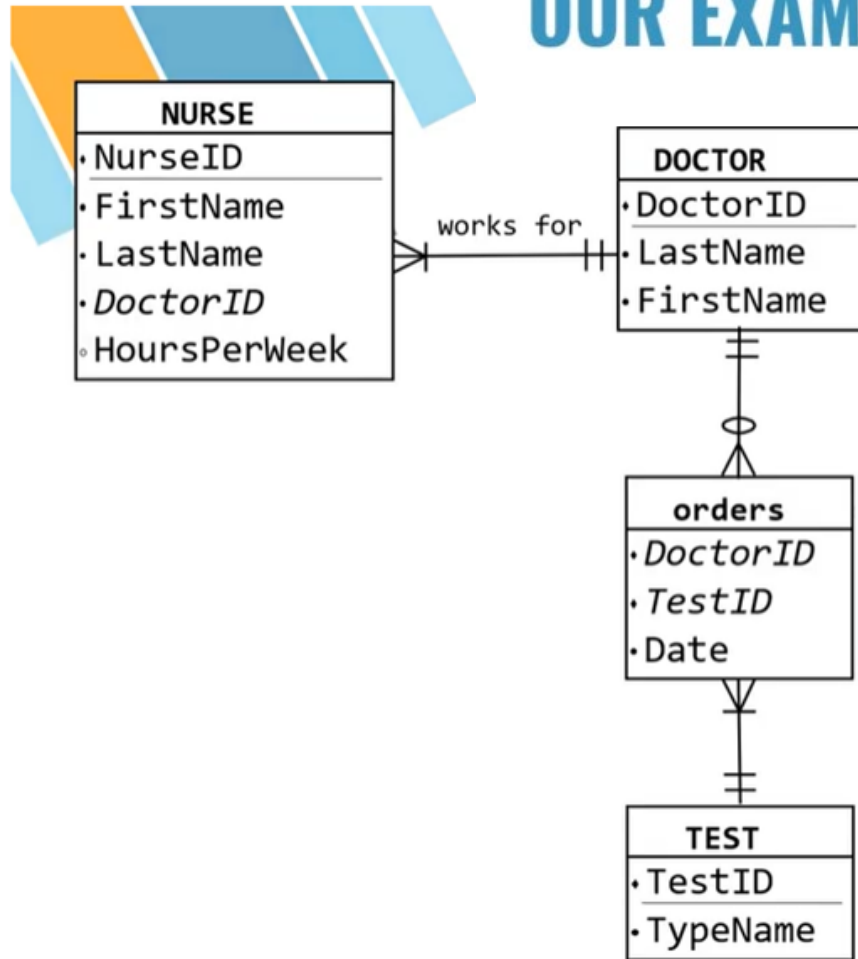
Once the **E-R model** is built, it is used as a **blueprint** to build the real **database**

- Model is mapped to an actual relational database
- **Visualization (diagram) of the data**

Diagrams Used to:

- document a model
- describe structured data

OUR EXAMPLE FROM LAST WEEK





DATABASE DESIGN

- Will be converting the ERD to a Relational Database (in MS Access)
- Process of converting data model
 1. Transforms entities into tables
 2. Add attributes as table fields
 3. Define field metadata and keys
 4. Enforce relationships and constraints



MICROSOFT ACCESS

Part 1: Basics

Access

Recent

Pinned

Pin files you want to easily find later. Click the pin icon that appears when you hover over a file.

Today

Doctor.accdb
Documents

Database2.accdb
Documents

Yesterday

Western2.accdb
Documents

Western.accdb
Documents

Database1.accdb
Documents

MyDatabase.accdb
Documents

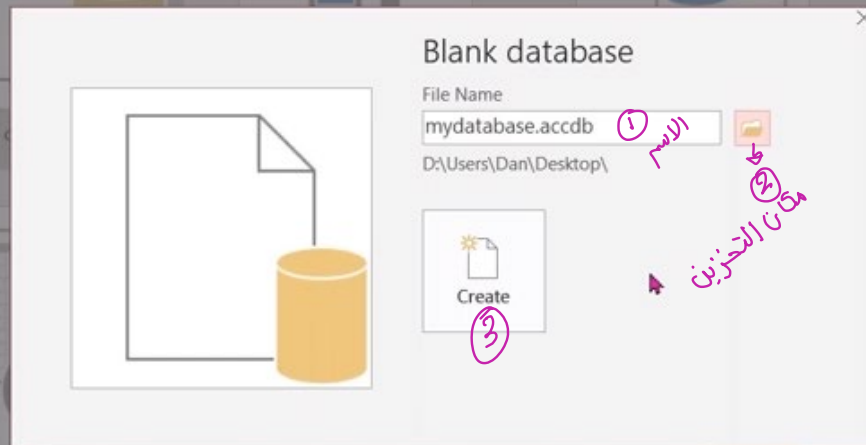
This Week

dservos5_Resale.accdb
Documents » p.xbit.ca » Lecture » L...

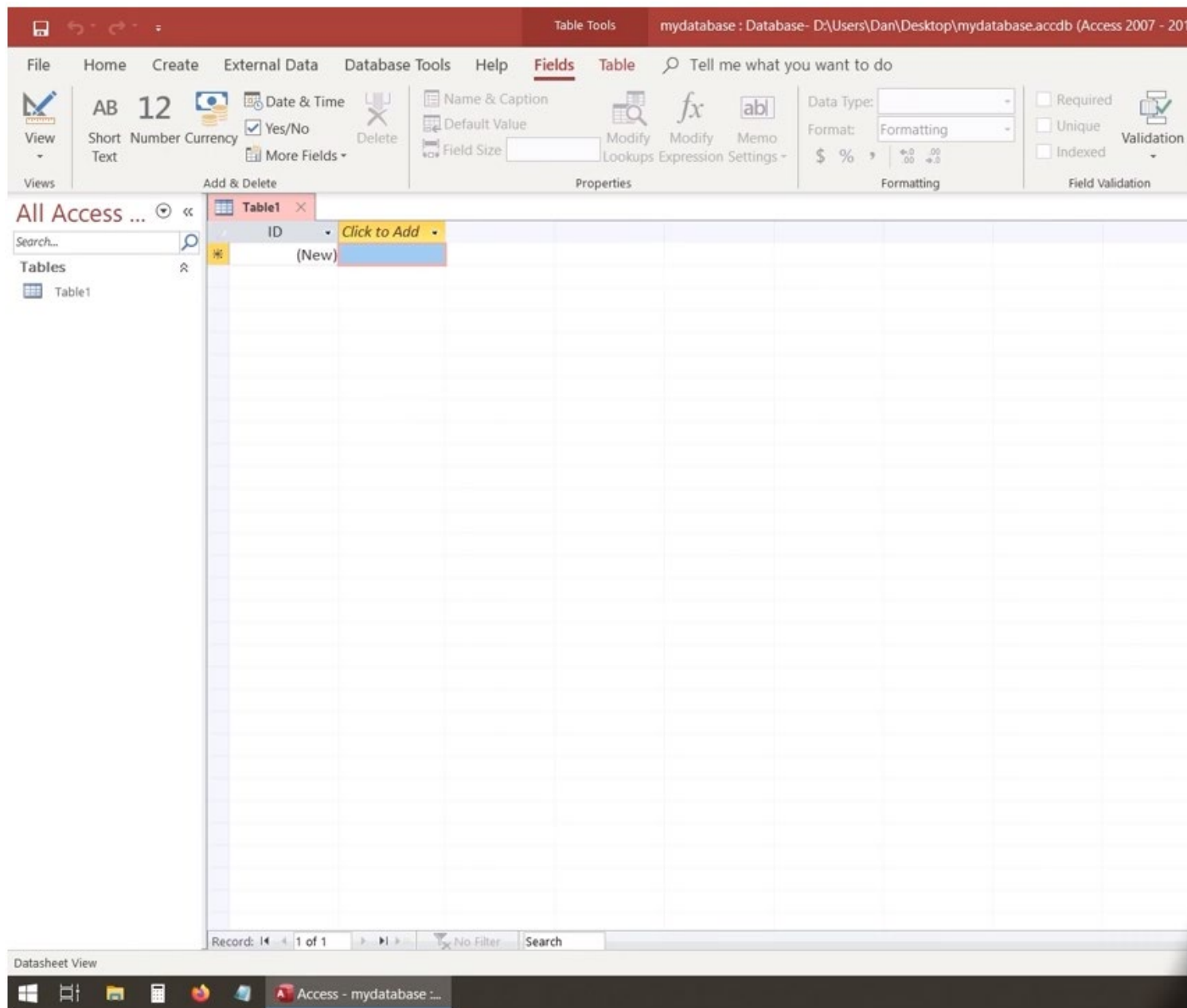
Open Other Files

Search for online templates

Suggested searches: Database Business Logs Industry Lists Personal Contacts



Tap View





EXTRA ACCESS RESOURCES

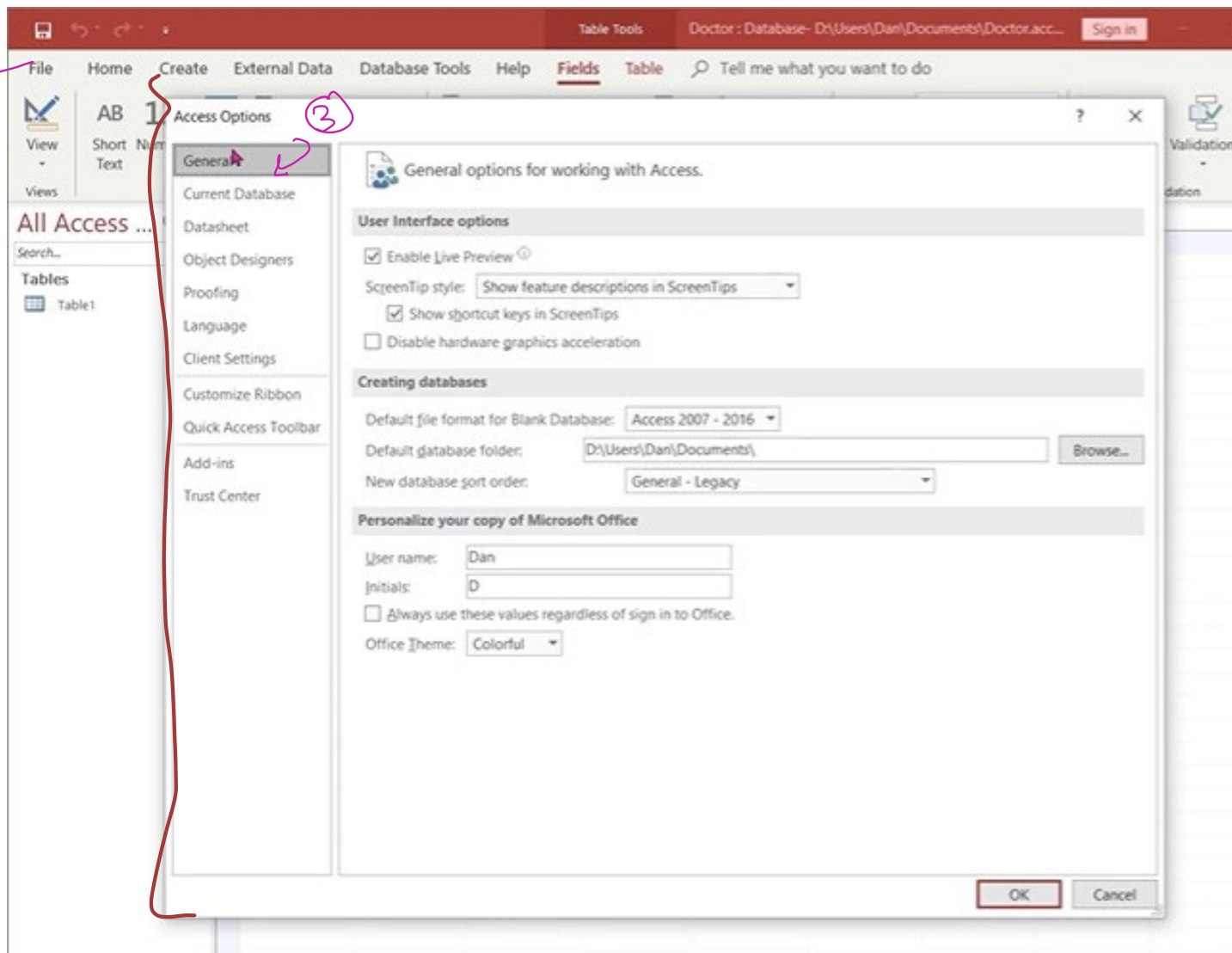
- [Access help & learning](#) (Official Microsoft Access documentation and resources)
 - [Intro to Access](#)
 - [Create a database in Access](#)
 - [Add tables](#)
 - [Use relationships](#)
 - [Add and edit data](#)
 - [Manage data with queries](#)
 - [Create forms](#)
 - [Create reports](#)

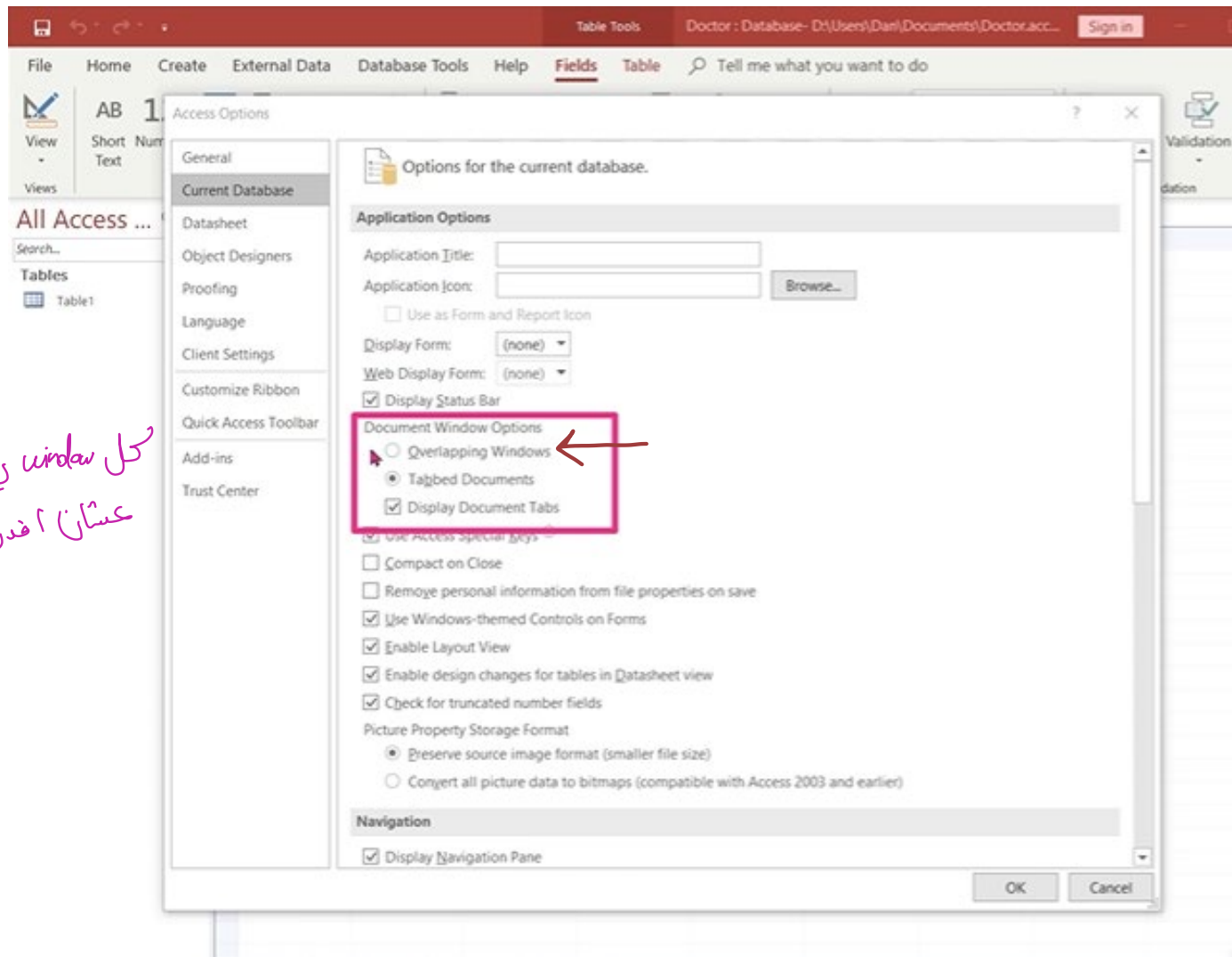


MICROSOFT ACCESS

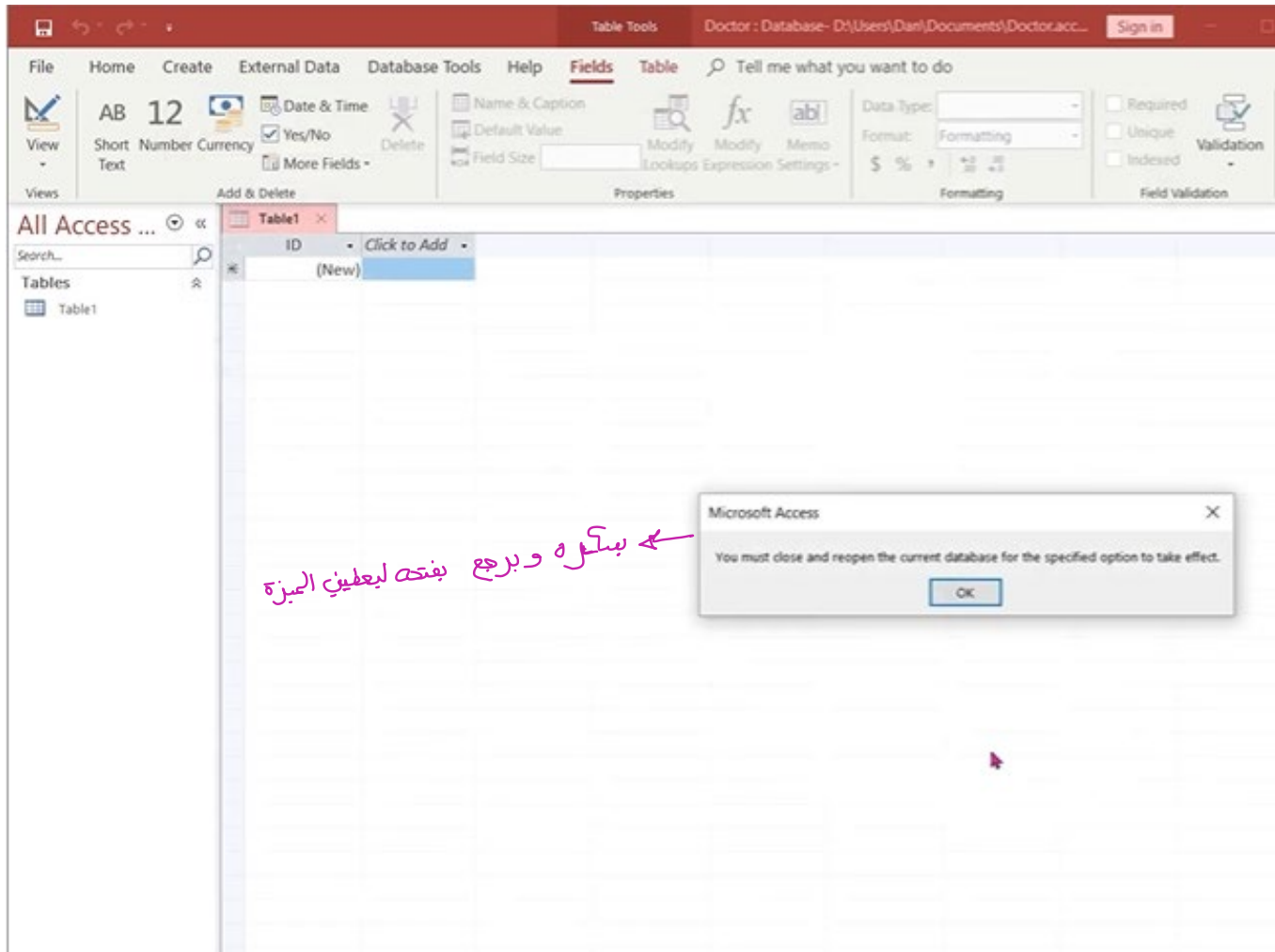
Part 2: Your First Table & Adding Fields

①
2) Option



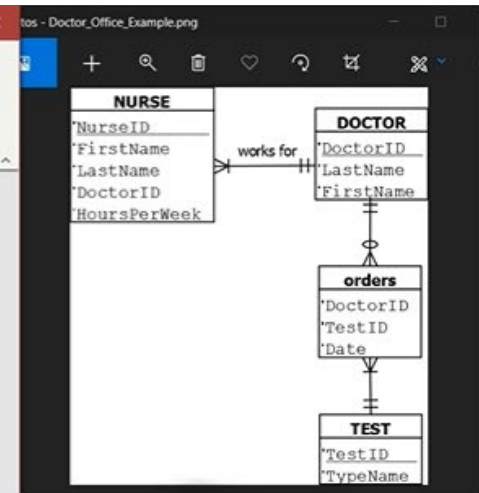
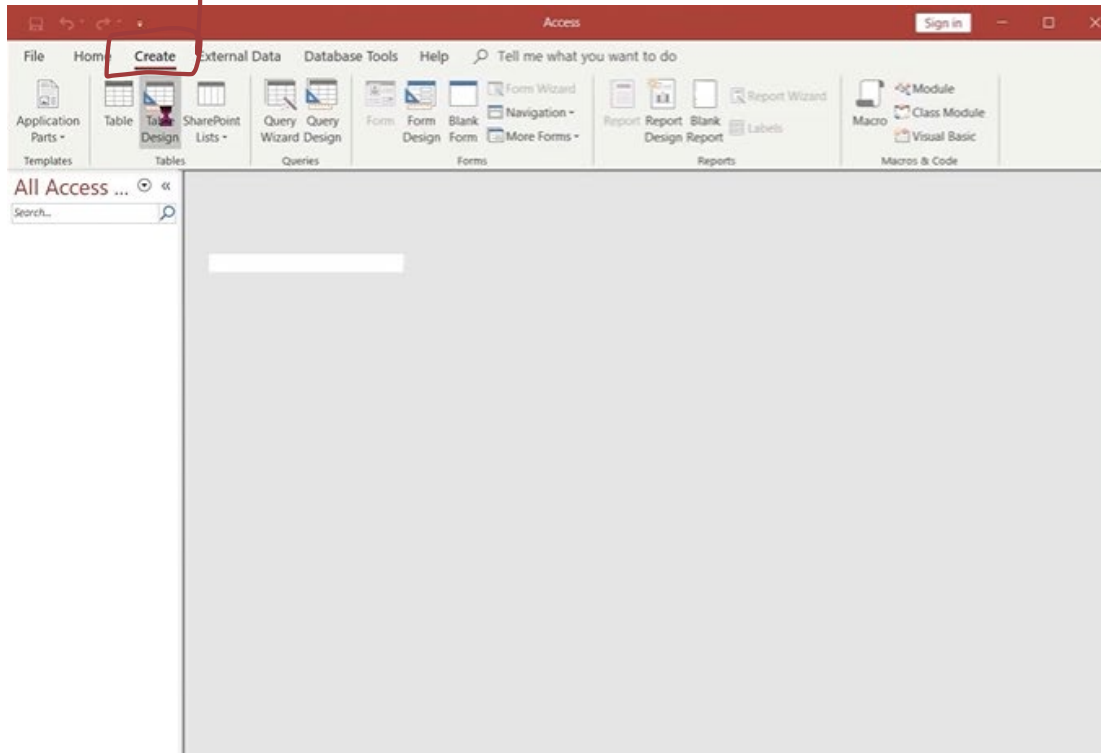


کلیں window کے جتنی Table
عسائی افسر انکم

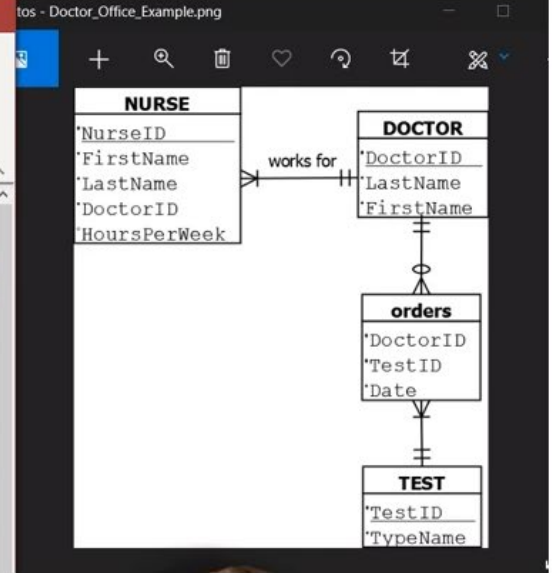


بعد ما ارجع افصحه
↓

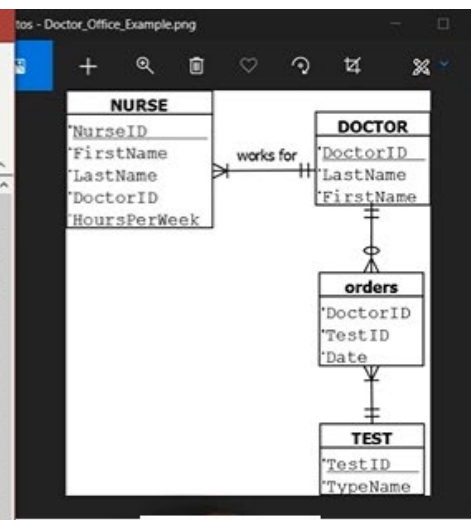
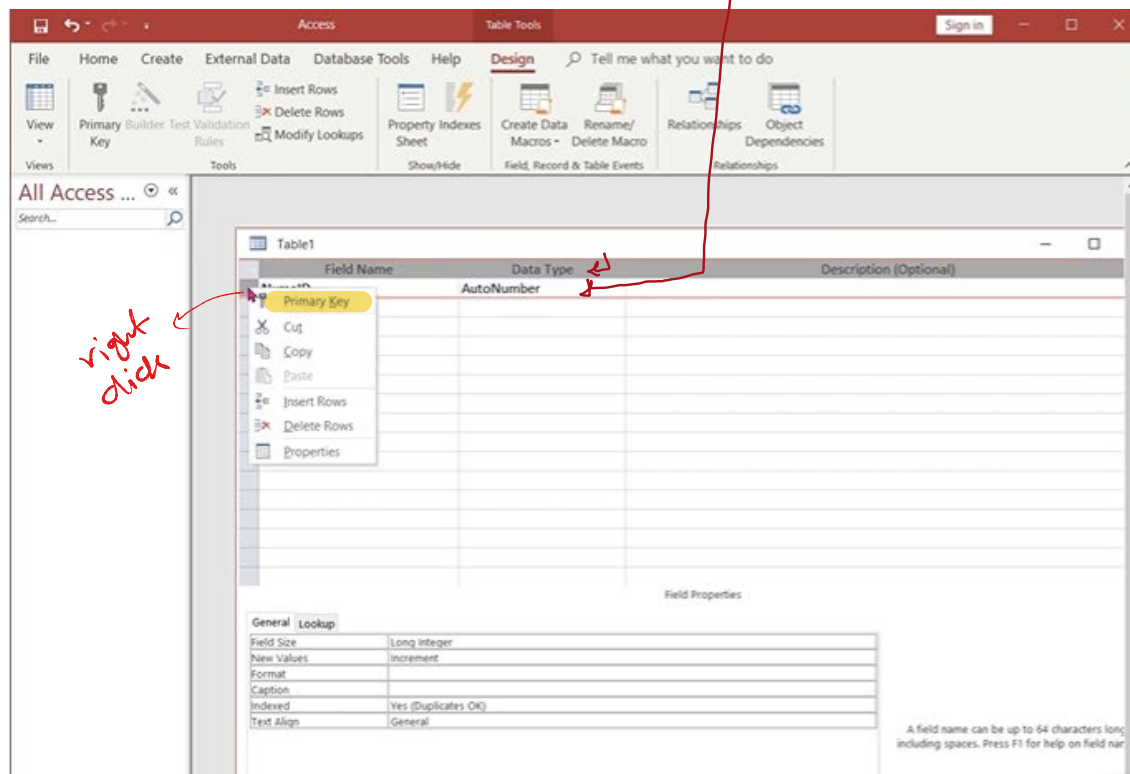
①
←



بغير ائینہ مکان ال window



Autonumber : يعرف default by موافقات ما بغيره من البرامج
 Number : بقدر اغير



NurseID	Number
FirstName	Short Text
LastName	Short Text
DoctorID	Number
HoursePerWeek	Number

← بعد ما عینه کامل
 بجل save باسم NURSE
 "capital letter"
 ← بعد بن برج اعلى create
 وبتدر خطوات

Field Properties

General Lookup

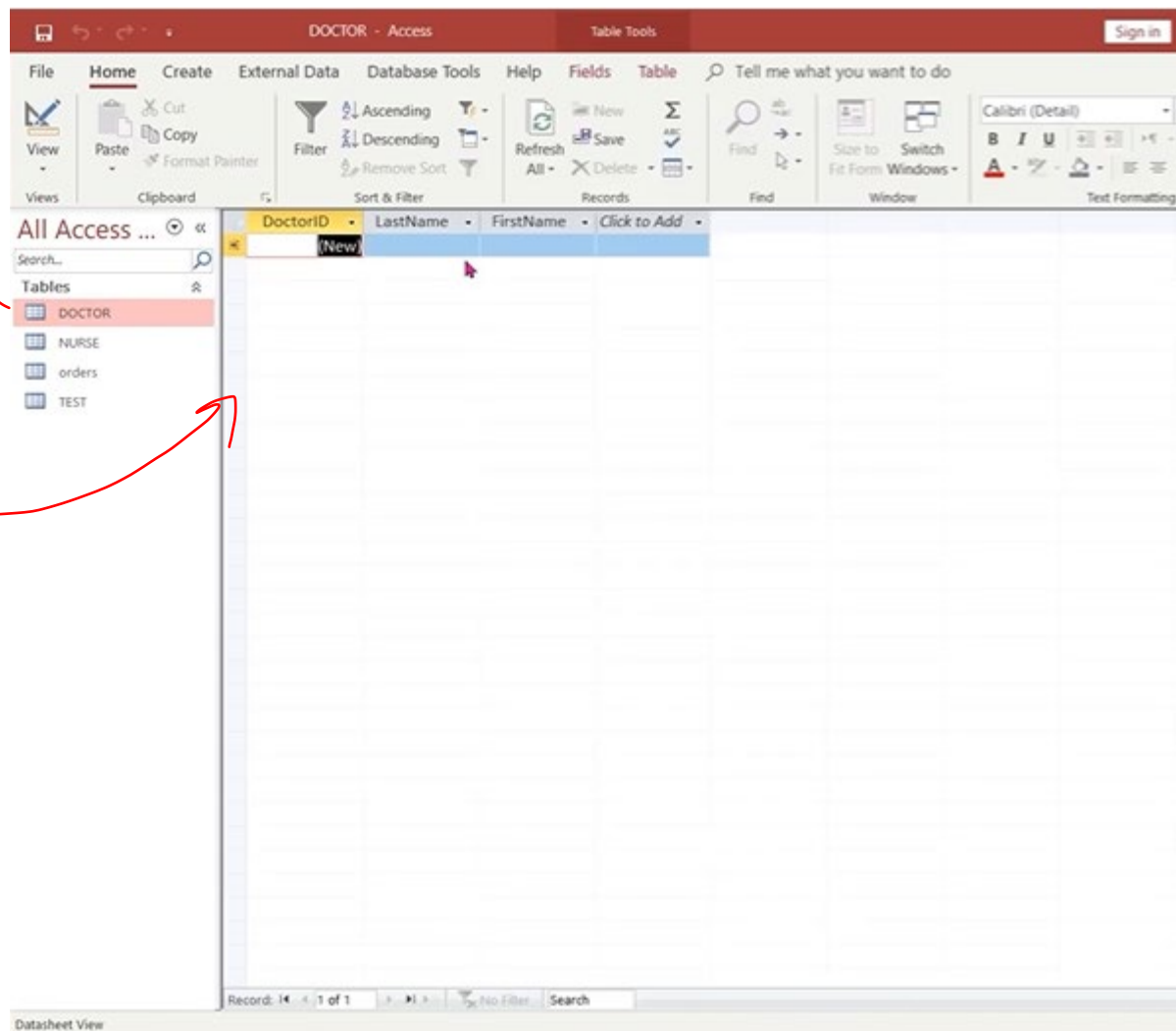
Field Size	Double
Format	
Decimal Places	Auto
Input Mask	
Caption	
Default Value	0
Validation Rule	
Validation Text	
Required	No
Indexed	No
Text Align	General

عیننا (لا Hours Per Week)
 لانه ممکن تگون کسور

لازم
 بنویسند اندا
 من بچین و بنویسند
 not required
 کتون

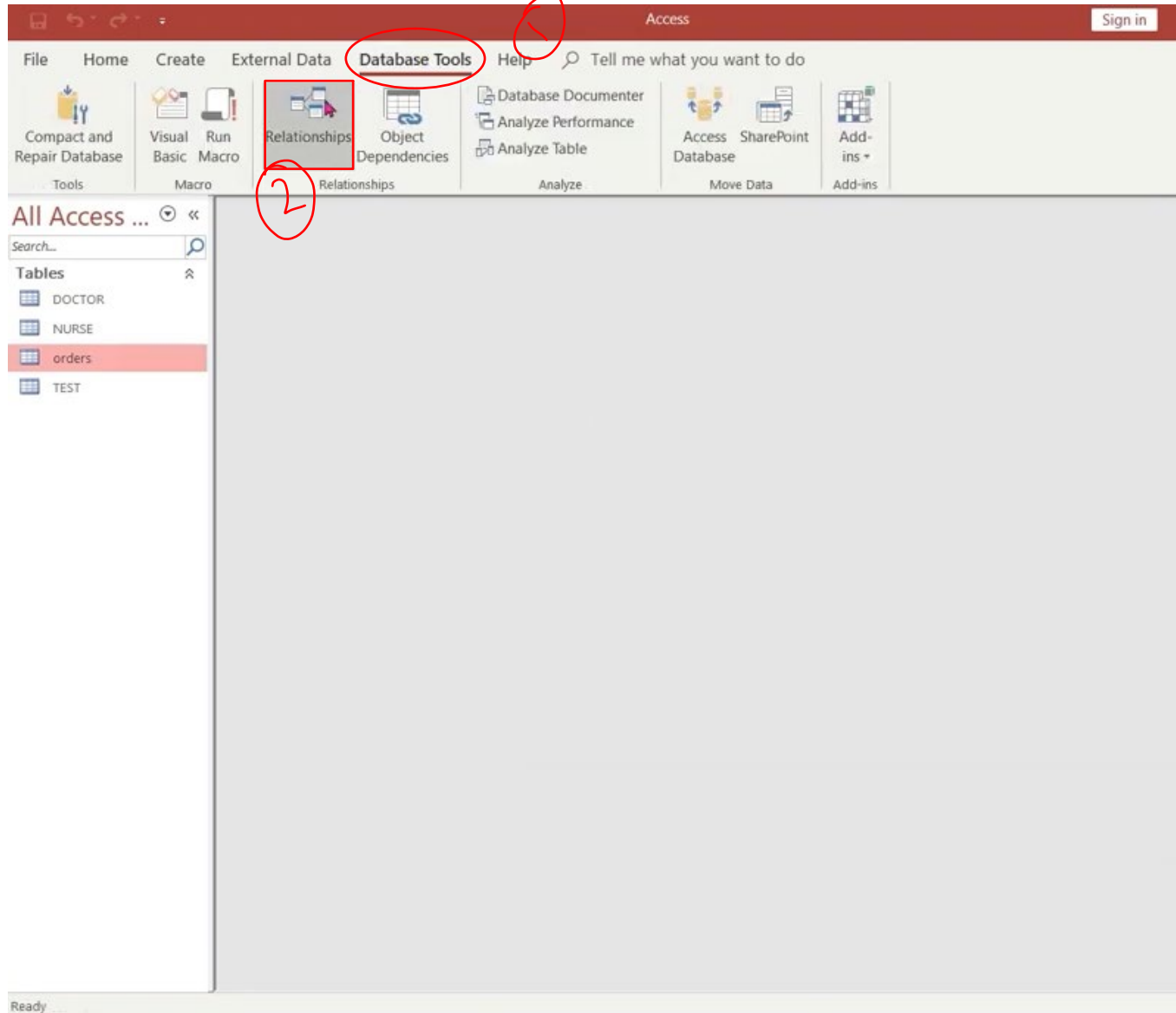
The size and type of numbers to enter in t
 field. The most common settings are Dou
 and Long Integer. If this field will be joine
 an AutoNumber field in a many-to-one
 relationship, this setting must be Long Inte

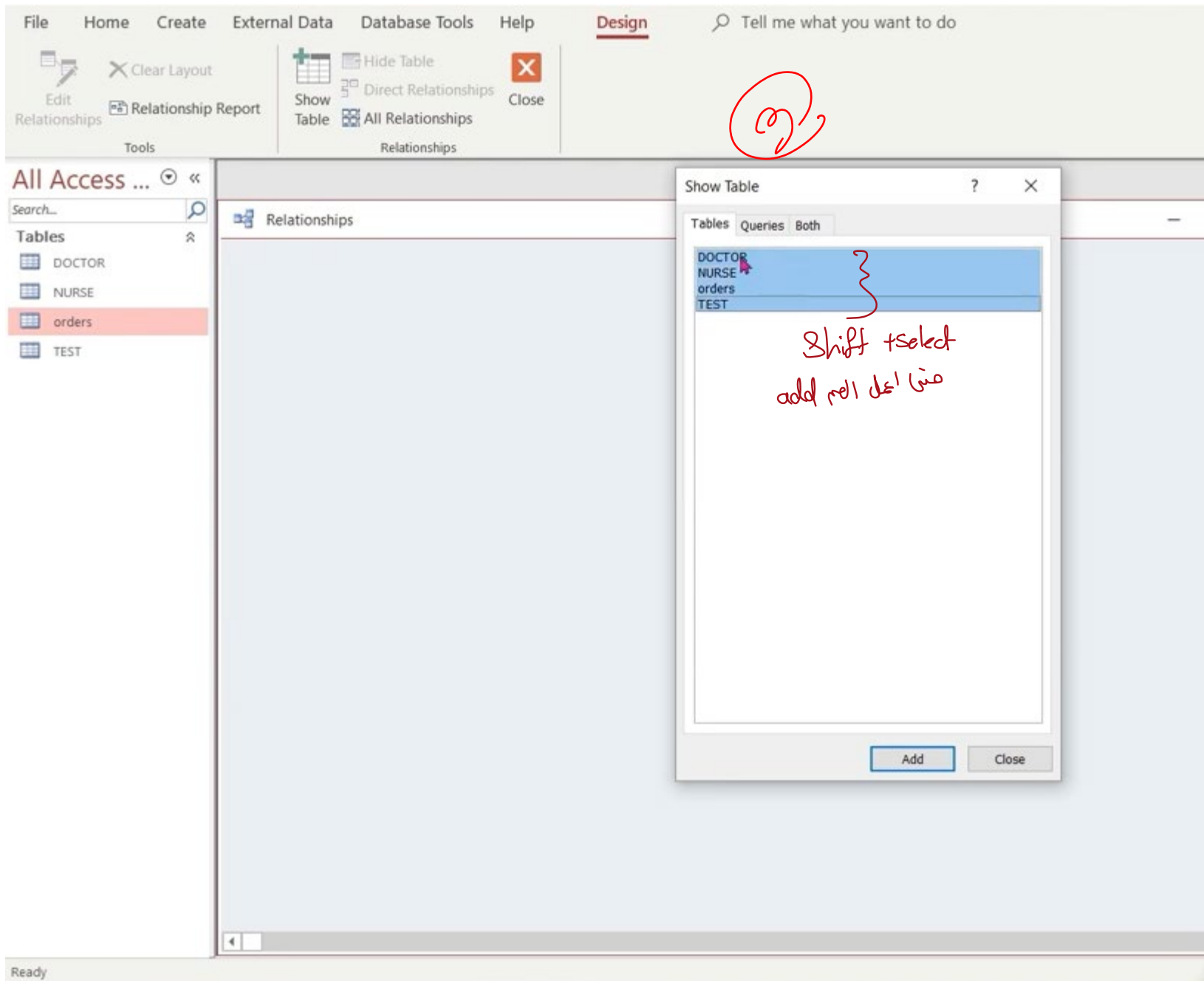
Double click
في ادخل الـ
instance



mapping rules

لے بدنا نفرو (Relationship)





File Home Create External Data Database Tools Help Design Tell me what you want to do

Tools Relationships

Clear Layout Show Table Hide Table Direct Relationships All Relationships Close

All Access ... Search...

Tables

- DOCTOR
- NURSE
- orders
- TEST

Relationships

DOCTOR

- DoctorID
- LastName
- FirstName

NURSE

- NurseID
- LastName
- FirstName
- DoctorID
- HoursPerWeek

orders

- DoctorID
- TestID
- TestDate

TEST

- TestID
- TypeName

* برج برنیم (ی) ما مو عی

1) Nurse 2) Doctors 3) orders 4) test

Access Relationship Tools Sign in

File Home Create External Data Database Tools Help Design Tell me what you want to do

Tools Relationships

Clear Layout Hide Table Direct Relationships Close

Edit Relationships Show Table All Relationships

All Access ... Search...

Tables

- DOCTOR
- NURSE
- orders
- TEST

Relationships

Edit Relationships

Table/Query: DOCTOR Related Table/Query: NURSE

DoctorID DoctorID

☒ Enforce Referential Integrity

☐ Cascade Update Related Fields

☐ Cascade Delete Related Records

Relationship Type: One-To-Many

Create Cancel Join Type.. Create New..

NURSE

- NurseID
- LastName
- FirstName
- DoctorID
- HoursPerWeek

DOCTOR

- DoctorID
- LastName
- FirstName

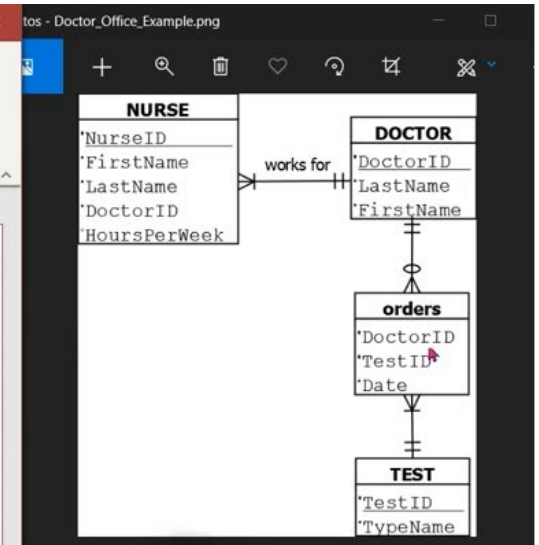
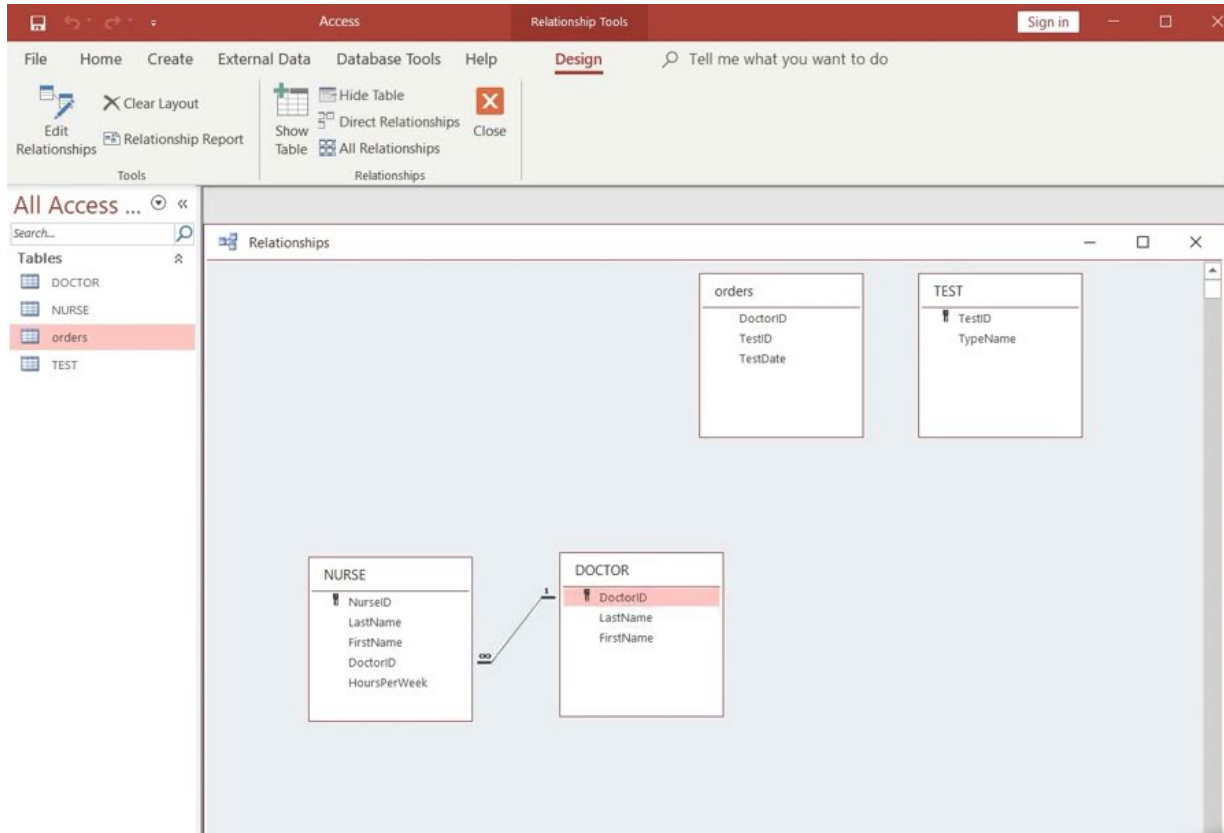
TEST

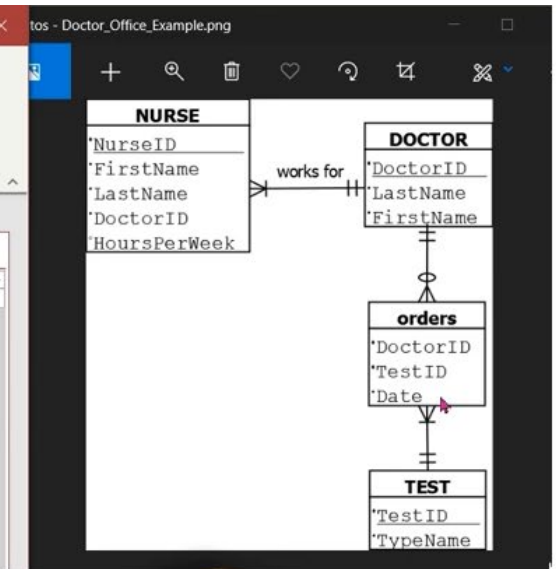
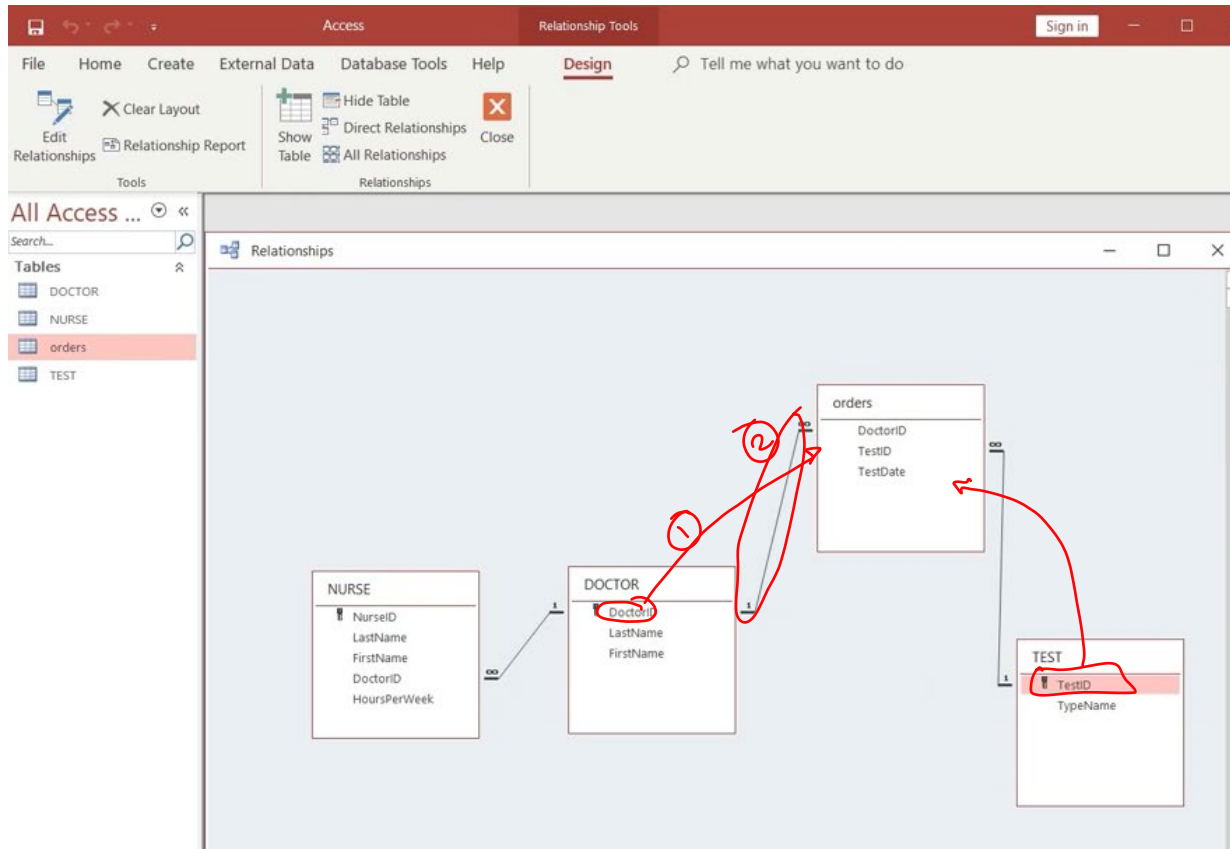
- TestID
- TypeName

باخذو ويحطه عند Doctor

1

2





بنا نحوه راپورت

Microsoft Access Tutorial 2: Reports

The screenshot displays the Microsoft Access interface. The ribbon is set to the 'Create' tab, with 'Report Wizard' selected. The left-hand pane shows a database structure with the following tables: DOCTOR, NURSE, orders, and TEST. The main workspace shows a report in Design View. The report has four columns and four rows. The first row is highlighted in blue. A purple circle is drawn around the value '2' in the third column of the second row. The data in the report is as follows:

	Amal	Adnan	1	4
2	Ahlam	Hamad	2	8
3	Camillia	Farah	2	5
*	0		0	0

At the bottom of the window, the status bar indicates 'Records: 4 of 3' and 'No Filter'.

Microsoft Access - Report Layout Tools - Access

File Home Create External Data Database Tools Design Arrange **Format** Page Setup Tell me what you want to do...

View Paste Copy Format Painter Filter Sort & Filter Ascending Descending Remove Sort Toggle Filter Refresh All Delete More Records Find Replace Go To Select Find Size to Fit Form Windows Switch Window Text Formatting

Report View Print Preview **Layout View** Design View

1 Amal
2 Ahlam
3 Camillia
0

NURSE Sunday, May 28, 2023 4:44:21 PM

NurseID	FirstName	LastName	DoctorID	HoursePerWeek
1	Amal	Adnan	1	4
2	Ahlam	Hamad	2	8
3	Camillia	Farah	2	5

Page 1 of 1

Record: 1 of 3 No Filter Search

Layout View

لنعديل (الView)

يقدر احد الجصاص واحدته

يقدر اعدل الجصم

من Format
يقدر اغير لونها

من Format
يقدر اعدل عليه

Report Layout Tools

NURSE - Access

File Home Create External Data Database Tools **Design** Arrange Format Page Setup Tell me what you want to do...

View Themes Fonts Colors Totals Group & Sort Hide Details

Views Themes Grouping & Totals

Controls

Header / Footer

Tools

DOCTOR

NURSE

orders

TEST

FirstName	LastName	DoctorID	HoursePerWeek	Doctor Name
Amal	Adnan	1	4	Kamal
Ahlam	Hamad	2	8	Amjad
Camillia	Farah	2	5	Amjad

Page 1 of 1

1

2

3

لا تفوت column من جدول ثاني

بختار احدهم

FIELDS AVAILABLE FOR THIS VIEW.

DOCTOR

DoctorID

FirstName

LastName

LastName_DOCTOR

NURSE

NurseID

FirstName

LastName

DoctorID

HoursePerWeek

Fields available in related tables:

orders

Fields available in other tables:

TEST

File Home Create External Data Database Tools Design Arrange Format Page Setup Tell me what you want to do...

All Access ... Search... Tables DOCTOR NURSE orders TEST Reports NURSE NURSE

NURSE Sunday, May 28, 2023 4:54:45 PM

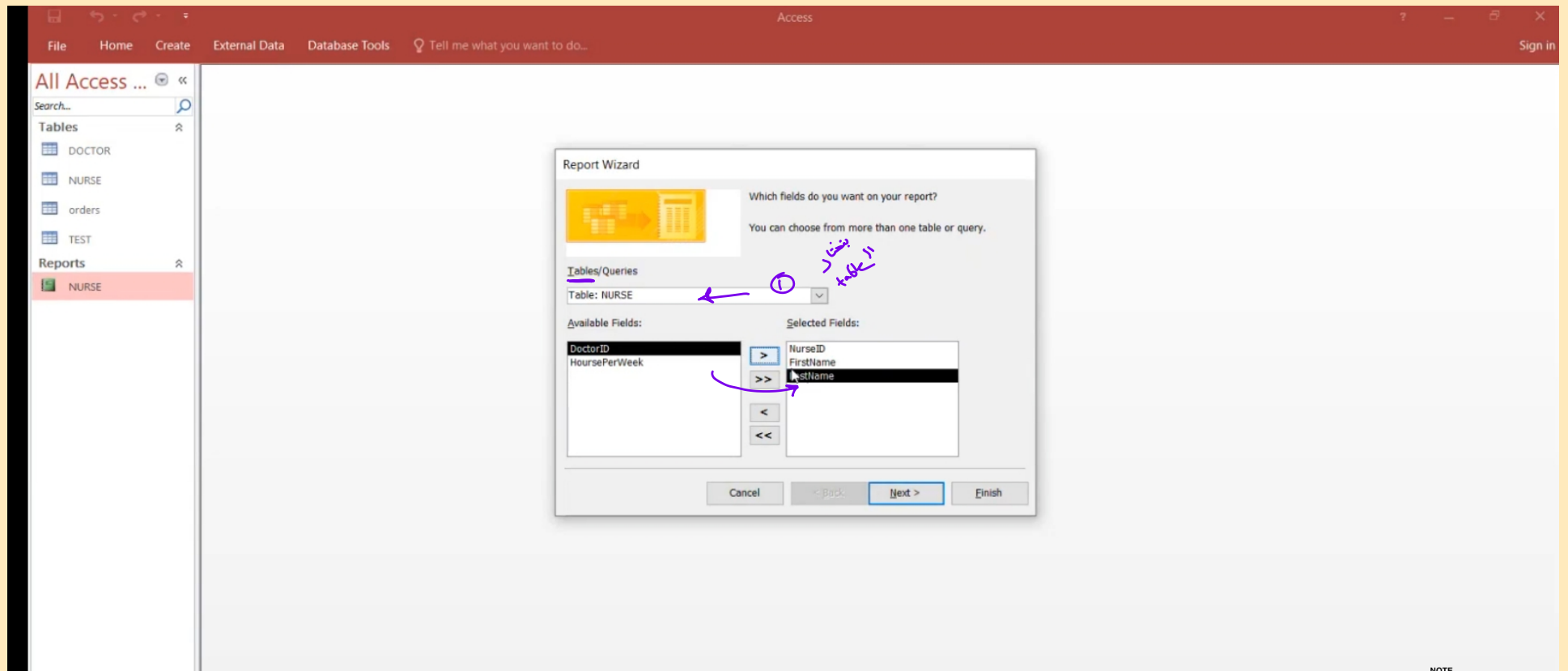
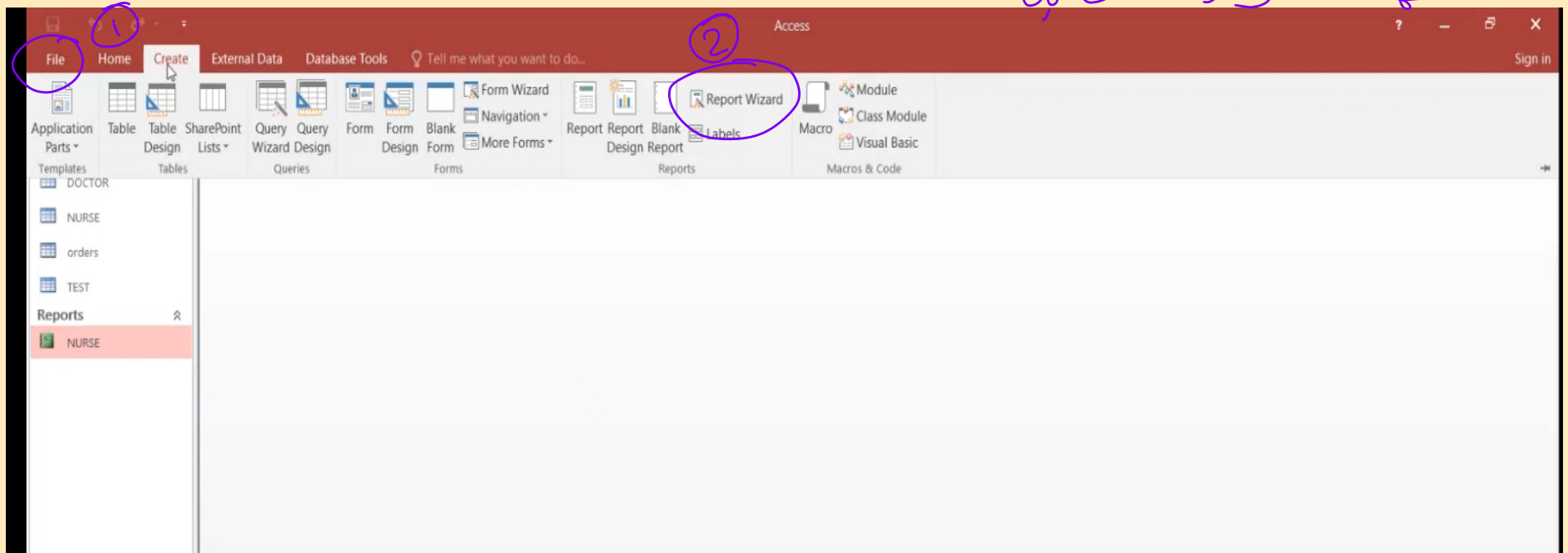
FirstName	LastName	Doctor Name	HoursePerWeek
Amal	Adnan	Adnan	4
Ahlam	Hamad	Hamad	8
Camillia	Farah	Farah	5

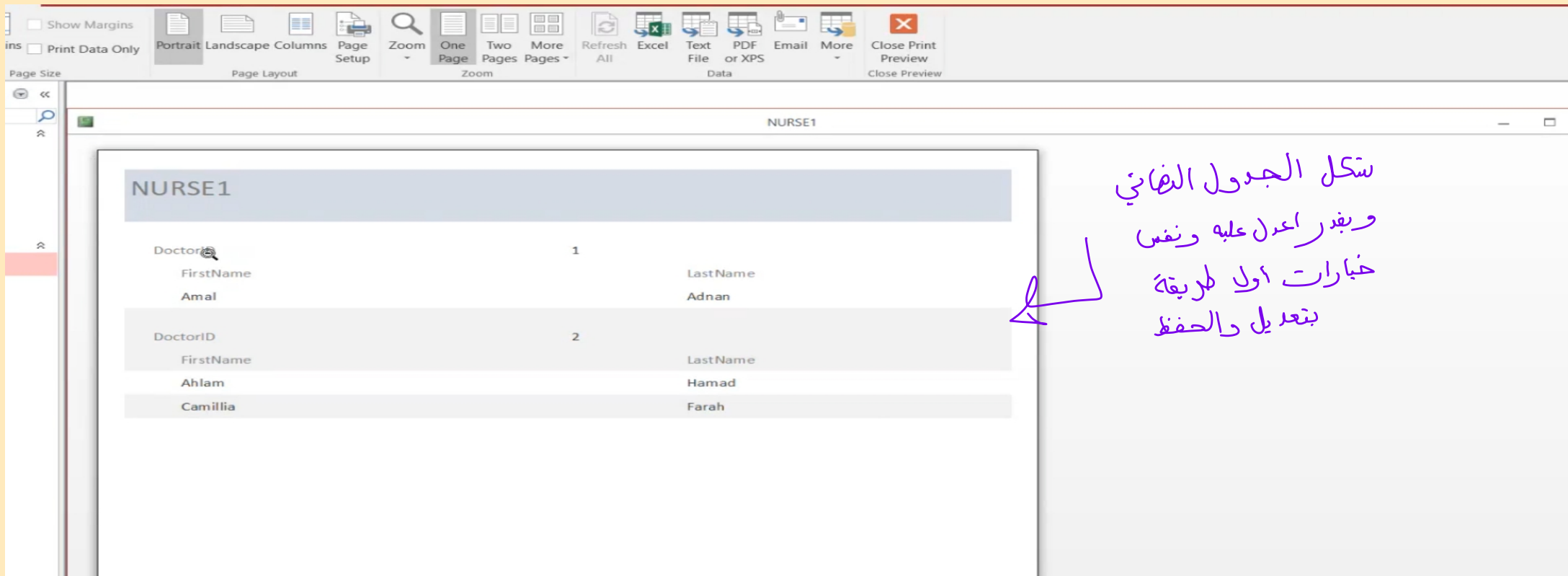
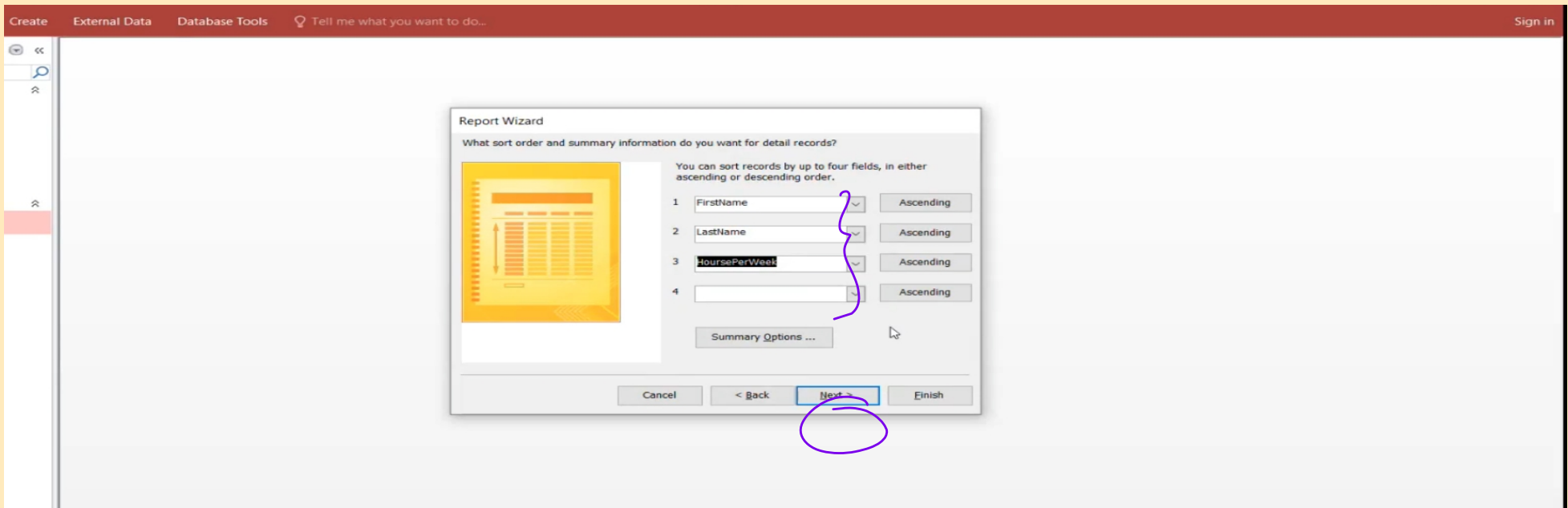
Page 1 of 1

بس اخلص بجل Save
بطلع هون "Reports"
واي تعديل بجله من عند ال Tabel
بعدل على ال Report او توماتيكي

* بقدر اخزن ال Report على شكل:
- PDF
- Excel
- Text file

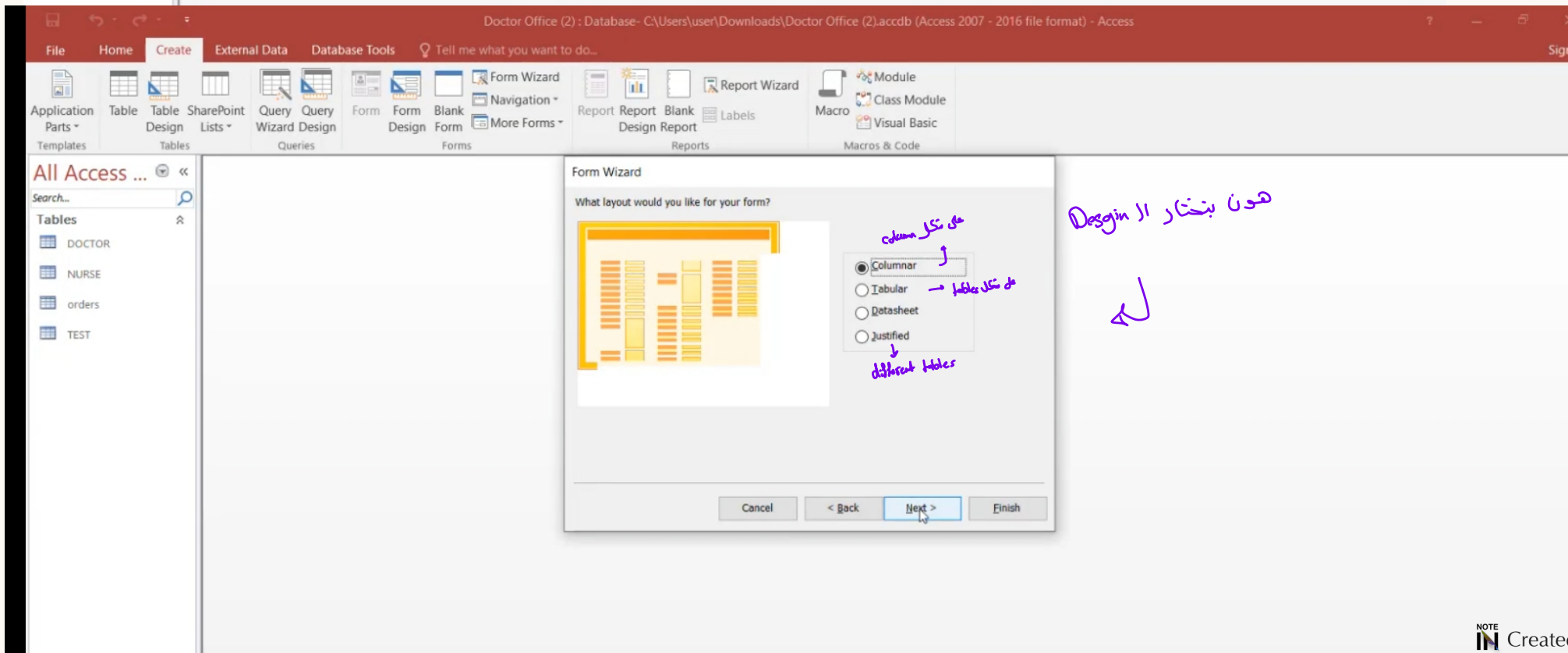
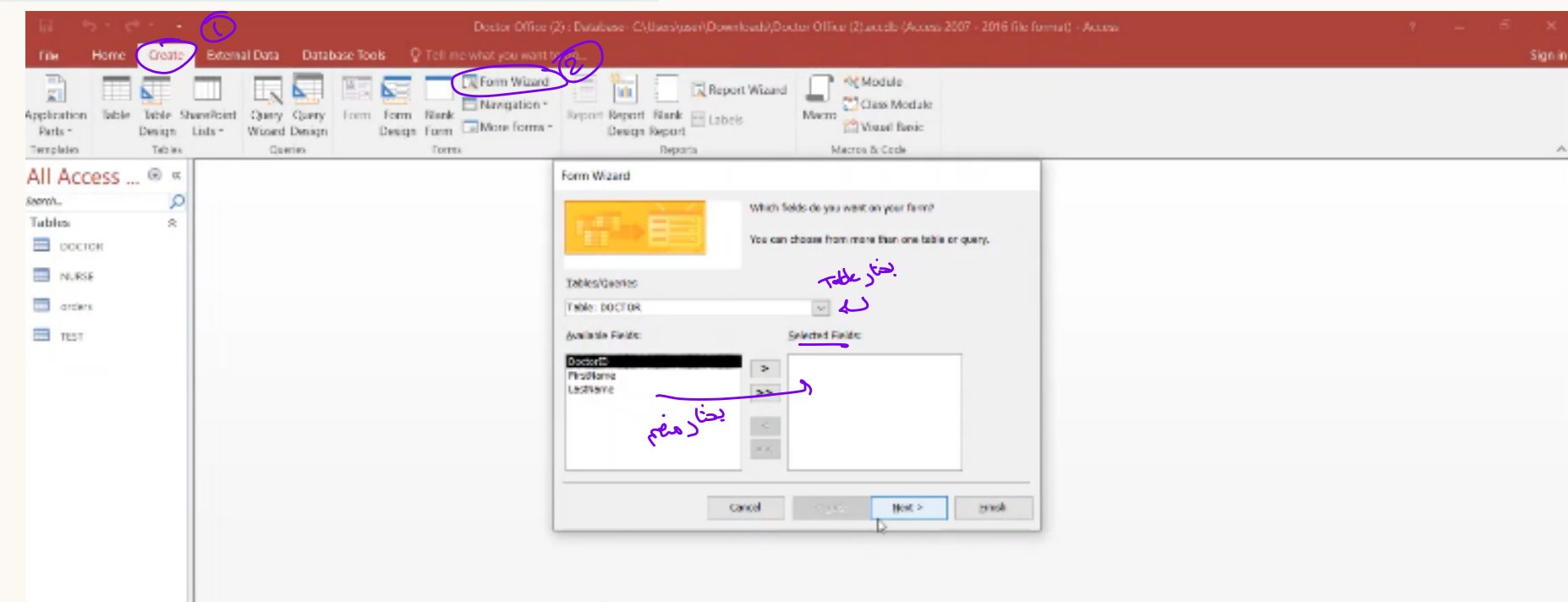
طريقة ثانية

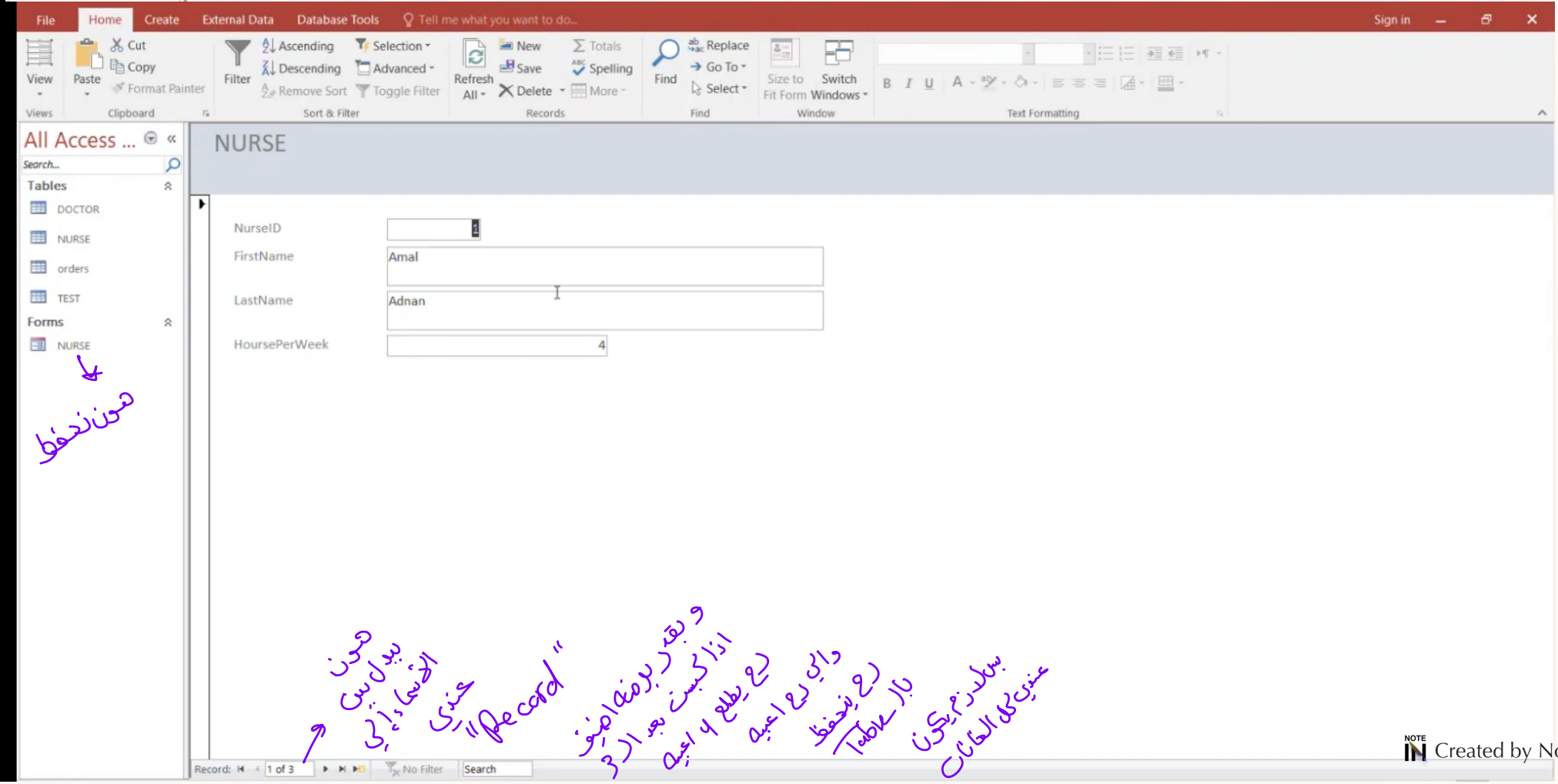
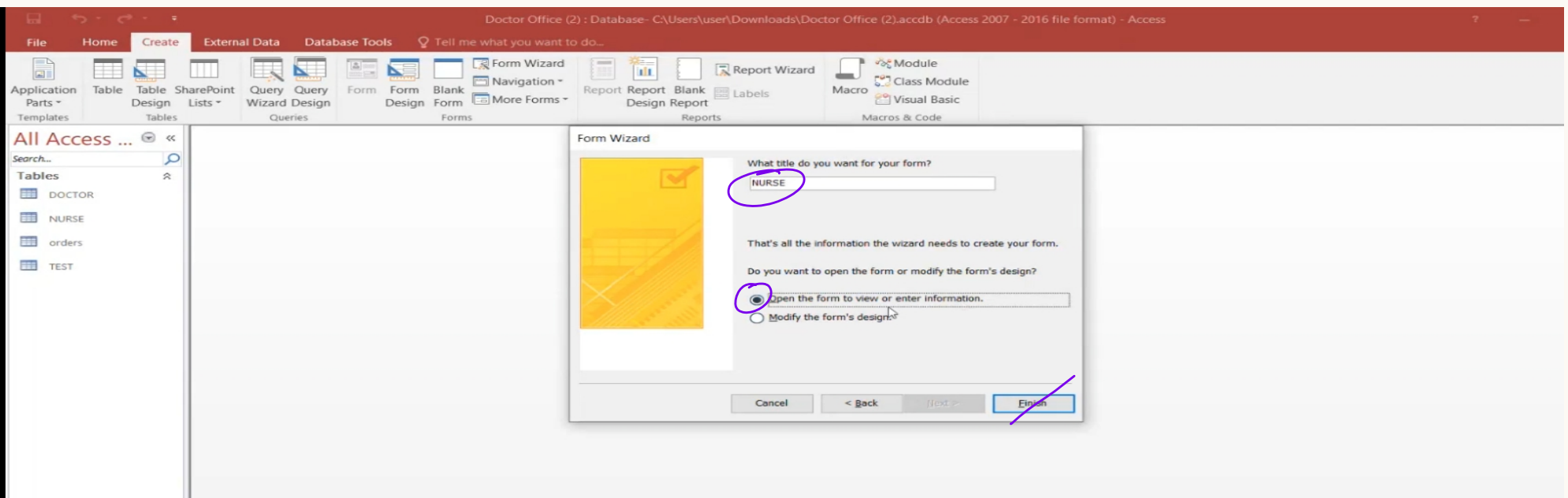




شكل الجدول النهائي
ويغير اعداد عليه ونفس
خيارات اول الطريقة
بتعديل والحفظ

Microsoft Access Tutorial 3: Formas





2) Design View

Microsoft Access - NURSE - Access

File Home Create External Data Database Tools Design Arrange Format Tell me what you want to do...

Views Themes Colors Themes

Form Header

NURSE

Detail

NurseID NurseID

FirstName FirstName

LastName LastName

DoctorID DoctorID

HoursePerWeek HoursePerWeek

Form Footer

Property Sheet

Selection type: Text Box

LastName

Format Data Event Other All

Format

Decimal Places Auto

Visible Yes

Show Date Picker For dates

Width 4.5333"

Height 0.4"

Top 1"

Left 1.8458"

Back Style Normal

Back Color Background 1

Border Style Solid

Border Width Hairline

Border Color Background 1, Darker 35%

Special Effect Flat

Scroll Bars Vertical

Font Name Calibri (Detail)

Font Size 11

Text Align General

Font Weight Normal

Font Underline No

Font Italic No

Fore Color Text 1, Lighter 25%

Line Spacing 0"

Is Hyperlink No

Display As Hyperlink If Hyperlink

Hyperlink Target

Gridline Style Top Transparent

Gridline Style Bottom Transparent

Gridline Style Left Transparent

Gridline Style Right Transparent

Gridline Width Top 1 pt

Gridline Width Bottom 1 pt

Gridline Width Left 1 pt

Gridline Width Right 1 pt

Top Margin 0"

3) من هنا يتطلع التفاصيل
و يقدر اعدل

File Home Create External Data Database Tools **Design** Arrange Format Tell me what you want to do...

Views Themes Colors Aa XXXX

Logo Title Date and Time Add Existing Fields Property Sheet Tab Order View Code Convert Form's Macros to Visual Basic Tools

All Access ... Search... Tables DOCTOR NURSE orders TEST Forms NURSE

Form Header

Detail

NurseID	NurseID
FirstName	FirstName
LastName	LastName
DoctorID	DoctorID
HoursePerWeek	HoursePerWeek

Form Footer

Command Button Wizard

Sample: [Image]

What action do you want to happen when the button is pressed?

Different actions are available for each category.

Categories:

- Record Navigation
- Record Operations
- Form Operations
- Report Operations
- Application
- Miscellaneous

Actions:

- Find Next
- Find Record
- Go To First Record
- Go To Last Record
- Go To Next Record
- Go To Previous Record

Cancel < Back Next > Finish

Property Sheet

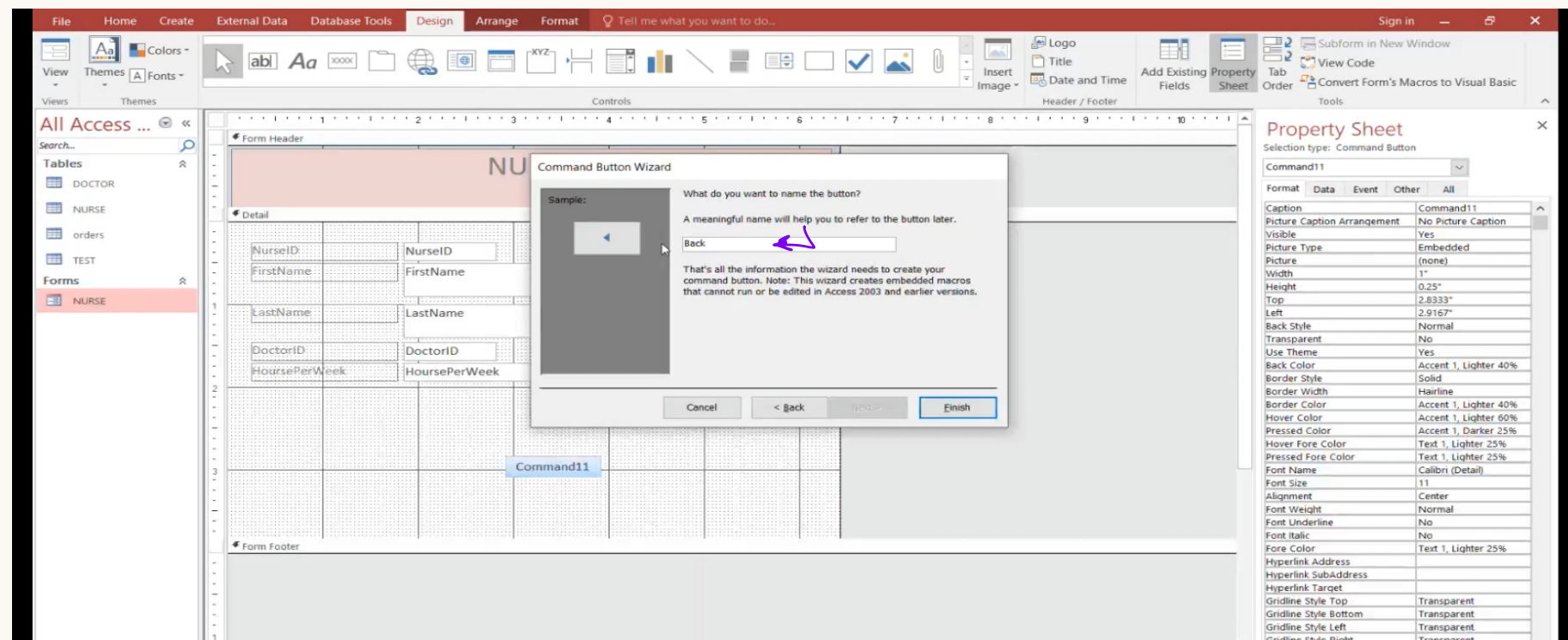
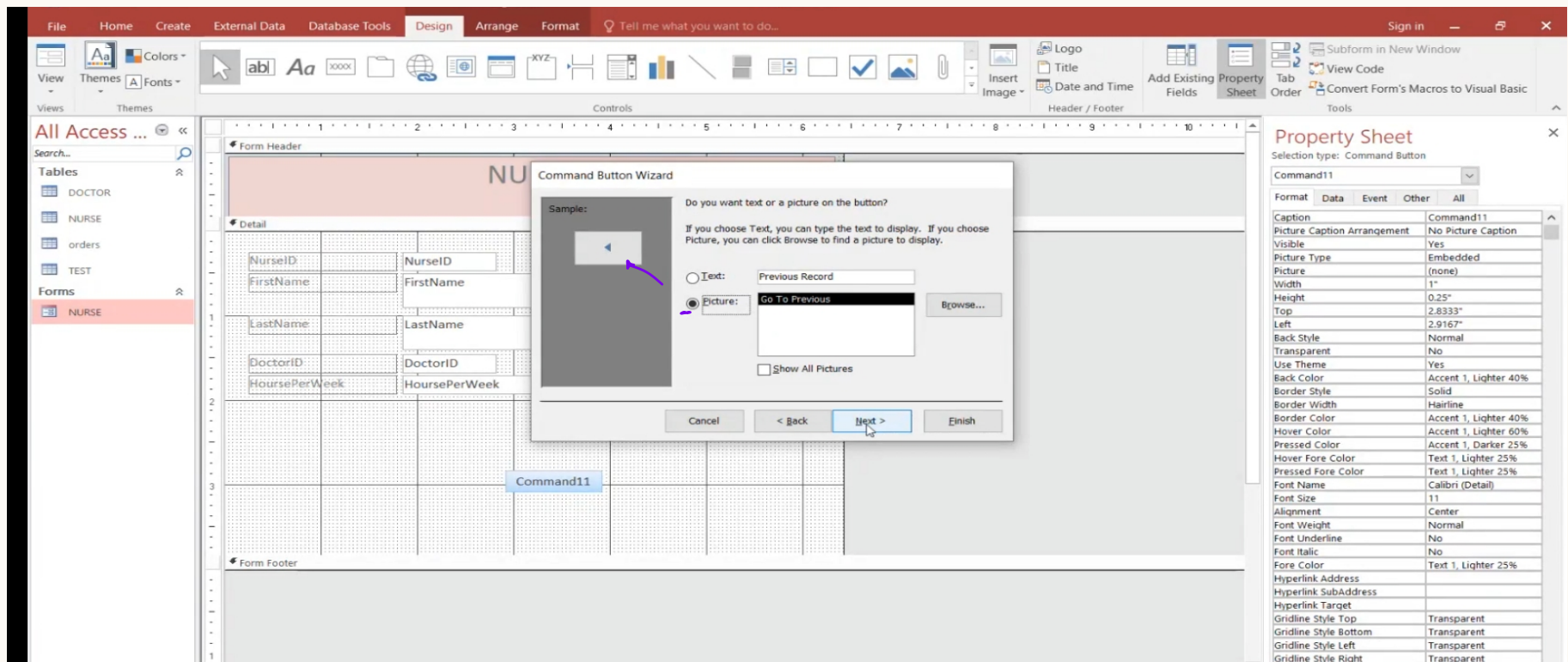
Selection type: Command Button

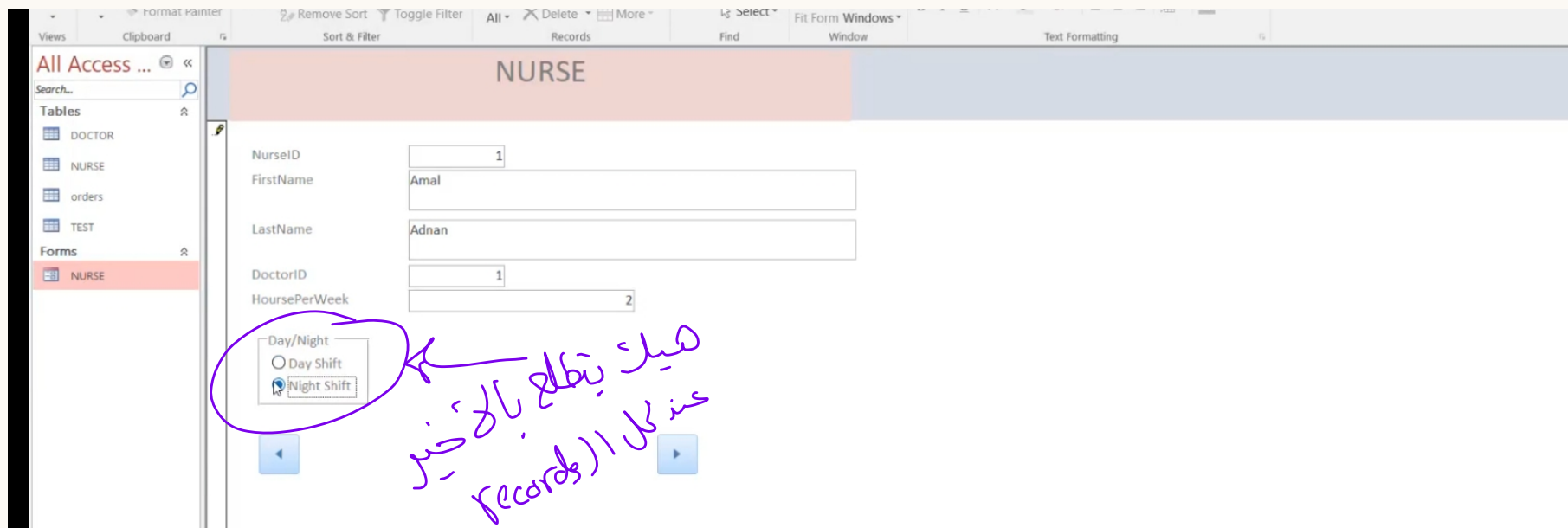
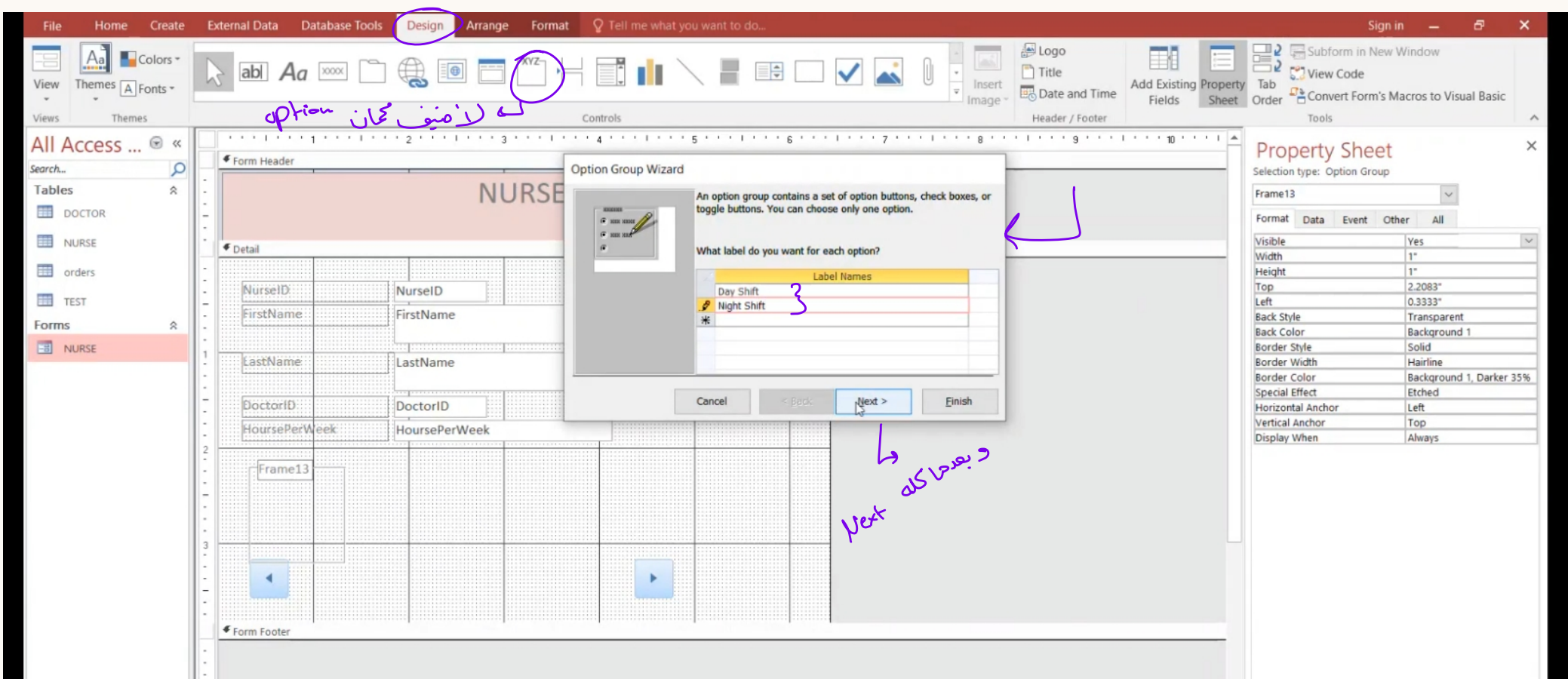
Command11

Format	Data	Event	Other	All
Caption	Command11			
Picture Caption Arrangement	No Picture Caption			
Visible	Yes			
Picture Type	Embedded			
Picture	(none)			
Width	1"			
Height	0.25"			
Top	2.8333"			
Left	2.9167"			
Back Style	Normal			
Transparent	No			
Use Theme	Yes			
Back Color	Accent 1, Lighter 40%			
Border Style	Solid			
Border Width	Hairline			
Border Color	Accent 1, Lighter 40%			
Hover Color	Accent 1, Lighter 60%			
Pressed Color	Accent 1, Darker 25%			
Hover Fore Color	Text 1, Lighter 25%			
Pressed Fore Color	Text 1, Lighter 25%			
Font Name	Calibri (Detail)			
Font Size	11			
Alignment	Center			
Font Weight	Normal			
Font Underline	No			
Font Italic	No			
Fore Color	Text 1, Lighter 25%			
Hyperlink Address				
Hyperlink SubAddress				
Hyperlink Target				
Gridline Style Top	Transparent			
Gridline Style Bottom	Transparent			
Gridline Style Left	Transparent			
Gridline Style Right	Transparent			
Gridline Width Top	1 pt			
Gridline Width Bottom	1 pt			

Command11

عشان يطلع الورد بدل بي مناجت





Microsoft Access - NURSE - Access

File Home Create External Data Database Tools **Design** Arrange Format Tell me what you want to do...

Views Themes Colors Aa XXXX [Icons] Insert Image

Logo Title Date and Time Add Existing Fields Property Sheet Tab Order Convert Form's Macros to Visual Basic

All Access ... Search... Tables: DOCTOR, NURSE, orders, TEST. Forms: NURSE

Form Header: NURSE

Detail:

NurseID	NurseID
FirstName	FirstName
LastName	LastName
DoctorID	DoctorID
HoursePerWeek	HoursePerWeek
Day/Night	
☐ Day Shift	
☐ Night Shift	

Form Footer

Combo Box Wizard

Which table or query should provide the values for your combo box?

Table: DOCTOR
Table: NURSE
Table: orders
Table: TEST

View: ☒ Tables ☐ Queries ☐ Both

Cancel < Back Next > Finish

Property Sheet

Selection type: Combo Box

Combo20

Format	Data	Event	Other	All
Decimal Places	Auto			
Visible	Yes			
Column Count	1			
Column Widths				
Column Heads	No			
List Rows	16			
List Width	Auto			
Separator Characters	System Separator			
Width	1"			
Height	0.2083"			
Top	1.9167"			
Left	5.2917"			
Back Style	Normal			
Back Color	Background 1			
Border Style	Solid			
Border Width	Hairline			
Border Color	Background 1, Darker 35%			
Special Effect	Flat			
Font Name	Calibri (Detail)			
Font Size	11			
Text Align	General			
Font Weight	Normal			
Font Underline	No			
Font Italic	No			
Fore Color	Text 2, Darker 50%			
Is Hyperlink	No			

Microsoft Access - NURSE - Access

File Home Create External Data Database Tools **Design** Arrange Format Tell me what you want to do...

Views Themes Colors Aa XXXX [Icons] Insert Image

Logo Title Date and Time Add Existing Fields Property Sheet Tab Order Convert Form's Macros to Visual Basic

All Access ... Search... Tables: DOCTOR, NURSE, orders, TEST. Forms: NURSE

Form Header: NURSE

Detail:

NurseID	NurseID
FirstName	FirstName
LastName	LastName
DoctorID	DoctorID
HoursePerWeek	HoursePerWeek
Day/Night	
☐ Day Shift	
☐ Night Shift	

Form Footer

Combo Box Wizard

Which fields of DOCTOR contain the values you want included in your combo box? The fields you select become columns in your combo box.

Available Fields: DoctorID, LastName

Selected Fields: FirstName

Cancel < Back Next > Finish

Property Sheet

Selection type: Combo Box

Combo20

Format	Data	Event	Other	All
Decimal Places	Auto			
Visible	Yes			
Column Count	1			
Column Widths				
Column Heads	No			
List Rows	16			
List Width	Auto			
Separator Characters	System Separator			
Width	1"			
Height	0.2083"			
Top	1.9167"			
Left	5.2917"			
Back Style	Normal			
Back Color	Background 1			
Border Style	Solid			
Border Width	Hairline			
Border Color	Background 1, Darker 35%			
Special Effect	Flat			
Font Name	Calibri (Detail)			
Font Size	11			
Text Align	General			
Font Weight	Normal			
Font Underline	No			
Font Italic	No			
Fore Color	Text 2, Darker 50%			
Is Hyperlink	No			

NURSE - Access

File Home Create External Data Database Tools Tell me what you want to do...

Views View Paste Copy Format Painter Filter Sort & Filter Ascending Descending Remove Sort Advanced Toggle Filter Refresh All Delete More Records Find Replace Go To Select Find Size to Fit Form Switch Windows Window Text Formatting

All Access ... Search...

Tables

- DOCTOR
- NURSE
- orders
- TEST

Forms

- NURSE

NURSE

NurseID 2

FirstName

LastName Hamad

DoctorID 2

HoursePerWeek 2

Doctor

Day/Night

☐ Day Shift

☒ Night Shift

Ahmad

Omar

Records

Record: 2 of 4 No Filter Search

میلہ بطع عنک اا