

CREATING A SIMPLE DATABASE SYSTEM WITH MICROSOFT ACCESS

A Practical Guide



Nurul Huda binti Abdul Rashid
Yusmawani binti Mohd Yusoff
Hafizah binti Ismail

A beginner's guide to develop practical database skills using Microsoft Access



FIRST EDITION

CREATING A SIMPLE DATABASE SYSTEM WITH MICROSOFT ACCESS

A Practical Guide

<https://kkpayabesar.mypolycc.edu.my>
elearningkkpb@gmail.com



NURUL HUDA BINTI ABDUL RASHID
LECTURER DH12
PROGRAMME OF INFORMATION
TECHNOLOGY (CERTIFICATE)



YUSMAWANI BINTI MOHD YUSOFF
LECTURER DH12
PROGRAMME OF INFORMATION
TECHNOLOGY (CERTIFICATE)



HAFIZAH BINTI ISMAIL
LECTURER DH12
PROGRAMME OF INFORMATION
TECHNOLOGY (CERTIFICATE)

FIRST EDITION

**CREATING A SIMPLE DATABASE SYSTEM
WITH
MICROSOFT ACCESS**

A Practical Guide

<https://kkpayabesar.mypolycc.edu.my>
elearningkkpb@gmail.com

First Edition 2025

Copyright of Digital Learning, Paya Besar Community College.

Copyright Reserved. Reproduction of any part of this publication in any form or by any means, electronic, photocopying, recording, mechanical, without prior written permission from the Digital Learning Unit of Paya Besar Community College is strictly prohibited.

Authors :

Nurul Huda binti Abdul Rashid
Yusmawani binti Mohd Yusoff
Hafizah binti Ismail

eISBN: 978-629-99371-7-3

Published by :

Paya Besar Community College
(Digital Learning Unit)
Ministry of Higher Education Malaysia
26300 Gambang, Pahang

Email : elearningkkpb@gmail.com

Website : <https://kkpayabesar.mypolycc.edu.my>



SYNOPSIS

This ebook is designed as a step-by-step practical guide for beginners, especially students, who want to learn how to build a simple and functional database system using Microsoft Access. It provides clear instructions, real-life examples, and practical exercises to help readers develop essential database skills.

Readers will learn the fundamental concepts of database design and understand the importance of organizing data effectively. The guide introduces Microsoft Access as an easy-to-use tool for creating databases without advanced programming skills.

Throughout this guide, readers will be guided through a hands-on project – designing and building a Student-Course Management System. This project allows users to create and manage tables, build relationships, develop user-friendly forms, run queries and generate reports for decision-making.

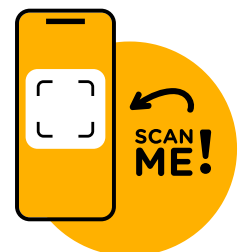
By the end of this ebook, readers will be able to:

- Understand the basic components of a database system.
- Create and design tables with appropriate field data types.
- Establish relationships between tables.
- Design forms for easy data entry.
- Perform queries to search, filter, and analyze data.
- Generate reports.

This ebook is perfect for students, beginners and anyone looking to develop practical database skills using Microsoft Access.

Scan to discover Video Introduction with AR

VIDEO AR





CHAPTER 01	Introduction	1
<hr/>		
CHAPTER 02	Getting Started with Microsoft Access	
	2.1 What is Microsoft Access?	2
	2.2 Advantages of Using Microsoft Access	2
	2.3 Microsoft Access layout	2
<hr/>		
	Planning Your Database System	
CHAPTER 03	3.1 Key Components of Microsoft Access	3
	3.2 Defining the Purpose of Your Database	3
	3.3 Designing a Simple Database System: The Student Management System	4
<hr/>		
	Creating Tables	
CHAPTER 04	4.1 Understanding Data Types	7
	4.2 Basic Creating Tables in Microsoft Access with AR	11
	4.3 Creating Tables in Microsoft Access	11
<hr/>		
	Designing Forms for Data Entry	
CHAPTER 05	5.1 Importance of Forms	20
	5.2 Creating Forms for the Student Management System	20
	5.3 Modifying Your Form	33
	5.4 Create a Main Menu Form	48
<hr/>		



Click on the page number
to go to the desired page



	Working with Queries	
CHAPTER 06	6.1 What are Queries?	57
	6.2 Creating Basic Queries	57
	6.3 Advanced Queries	67
<hr/>		
	Generating Reports	
CHAPTER 07	7.1 What are Reports?	70
	7.2 Creating Reports Using the Report Command	70
	7.3 Creating Reports Using the Report Wizard	73
	7.4 Customizing Reports	78
<hr/>		
CHAPTER 08	Automating Your Database with Macros	
	8.1 Creating Simple Macros	86
<hr/>		
CHAPTER 09	Conclusion	92
	Reference	93
<hr/>		



Click on the page number to go to the desired page



CHAPTER 1

Microsoft Access is a powerful and user-friendly database management system that enables users to create, store, and manage data efficiently.

This eBook provides a step-by-step guide to designing a simple database system, covering essential components such as tables, forms, queries, and reports.

By the end of this guide, you will be able to build a fully functional database system to manage real-world data.

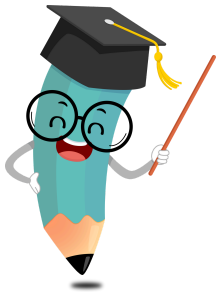




CHAPTER

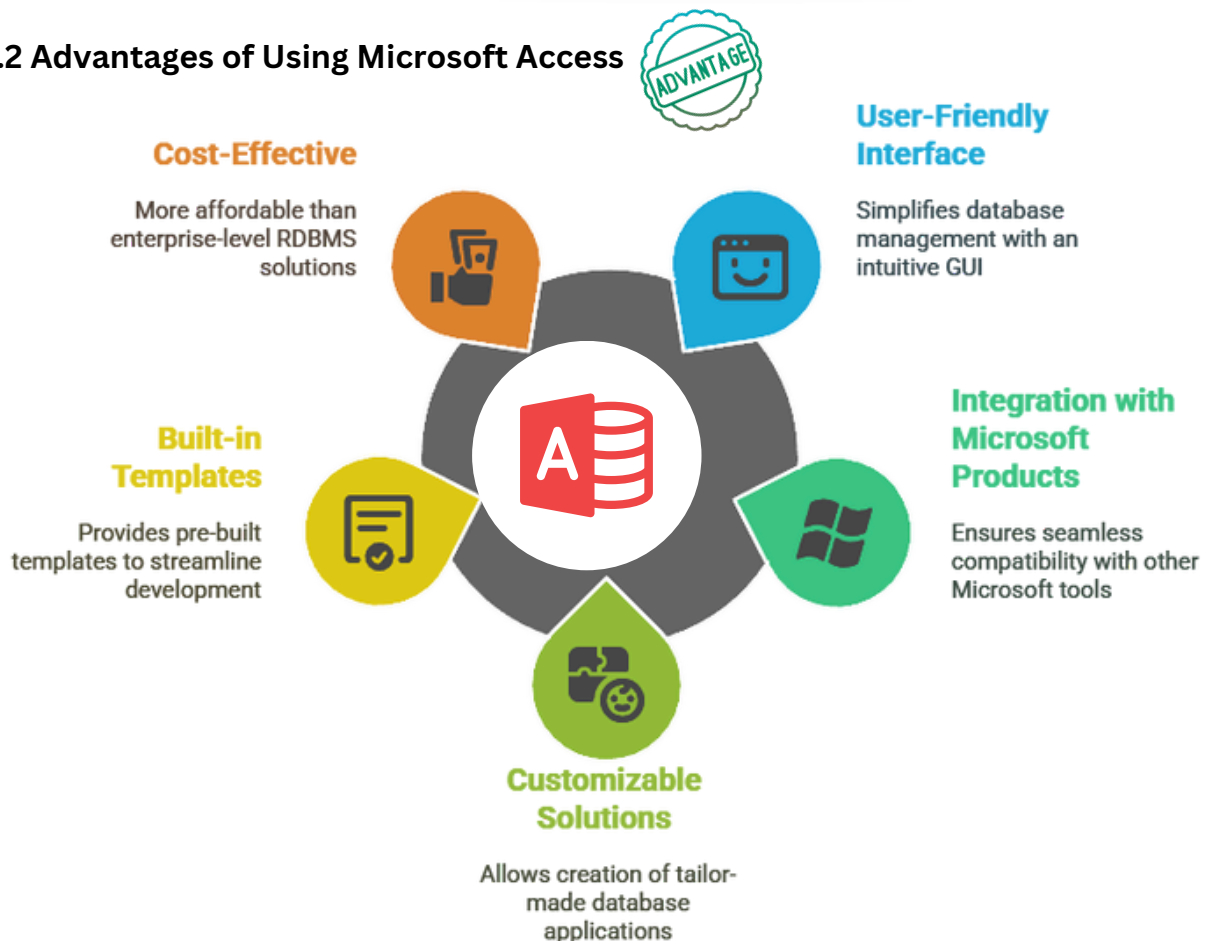
2

> 2.1 What is Microsoft Access?



Microsoft Access is a relational database management system (RDBMS) that allows users to store, retrieve, and manipulate data. It is commonly used for small to medium-scale applications, offering features such as tables, forms, queries, reports, and automation tools.

> 2.2 Advantages of Using Microsoft Access



> 2.3 Microsoft Access layout

Scan to discover Microsoft Access layout with AR

IMAGE AR





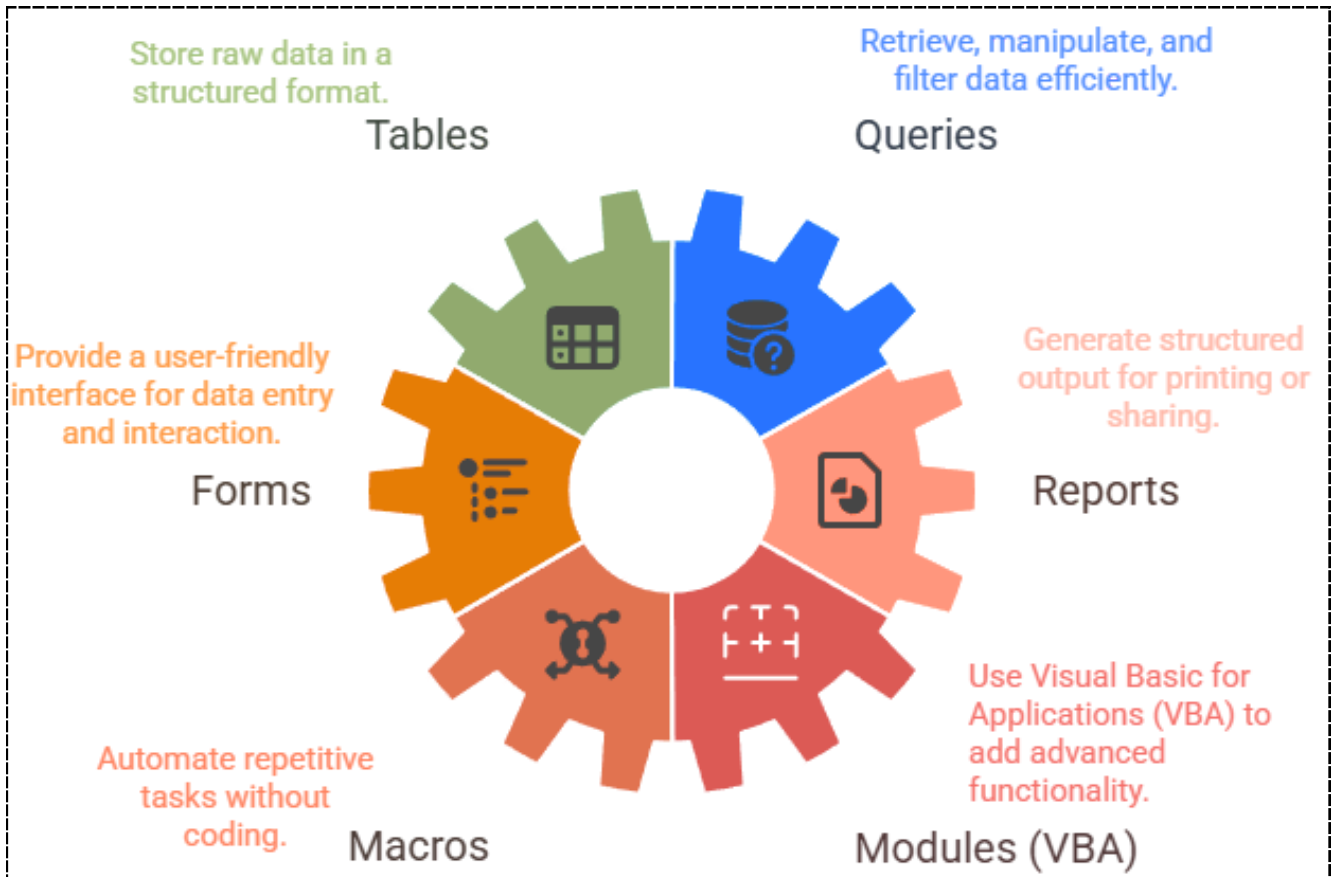
CHAPTER

3

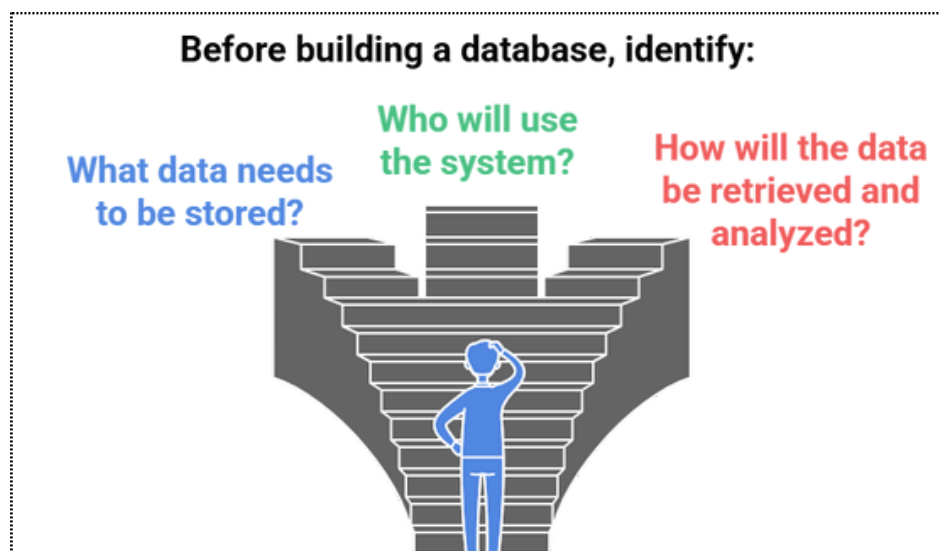
3.1 Key Components of Microsoft Access



To understand how to build a system in Access, it is essential to familiarize yourself with its core components:



3.2 Defining the Purpose of Your Database



> 3.3 Designing a Simple Database System: The Student Management System



A practical example used in this guide:

- Store student details
- Manage course enrollments
- Track student grades
- Generate reports



Scenario

You are tasked with developing a **Student Management System** using Microsoft Access. The system should **store student information, track their courses, and generate reports on student performance.**

Your database should allow users to:

1. Store student details (e.g., name, age, contact details, etc.).
2. Manage course enrollment (which students are enrolled in which courses).
3. Record student grades for each enrolled course.
4. Retrieve specific information using queries.
5. Generate reports summarizing student records and performance.



For this task, we need to create four(4) tables:

Table Name	Fields	Description
Students	StudentID (PK), FirstName, LastName, DOB, Gender, Address, ContactNumber, Email	Stores student personal details
Courses	CourseID (PK), CourseName, CourseCode, Instructor	Stores course information
Enrollment	EnrollmentID (PK), StudentID (FK), CourseID (FK), EnrollmentDate	Tracks which student is enrolled in which course
Grades	GradeID (PK), StudentID (FK), CourseID (FK), Grade	Stores students' grades

 (PK = Primary Key, FK = Foreign Key)

Scan to discover definition of Primary Key and Foreign Key with AR

IMAGE AR
(PRIMARY KEY)

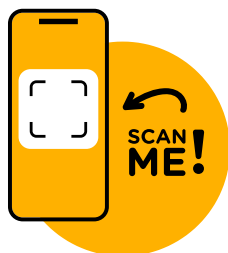


IMAGE AR
(FOREIGN KEY)





We need to identify the relationship between the tables. Here are the relationships between the tables:

Relationships Between Tables:

1. Students ↔ Enrollment

- **One-to-Many Relationship**
- A single student can enroll in multiple courses, but each enrollment record belongs to only one student.
- **Primary Key:** StudentID (Students)
- **Foreign Key:** StudentID (Enrollment)

2. Courses ↔ Enrollment

- **One-to-Many Relationship**
- A single course can have multiple students enrolled in it, but each enrollment entry links to only one course.
- **Primary Key:** CourseID (Courses)
- **Foreign Key:** CourseID (Enrollment)

3. Students ↔ Grades

- **One-to-Many Relationship**
- A student can receive multiple grades (one per enrolled course), but each grade entry is assigned to a single student.
- **Primary Key:** StudentID (Students)
- **Foreign Key:** StudentID (Grades)

4. Courses ↔ Grades

- **One-to-Many Relationship**
- A course can have multiple students with different grades, but each grade entry corresponds to a single course.
- **Primary Key:** CourseID (Courses)
- **Foreign Key :** CourseID (Courses)

5. Enrollment ↔ Grades

- **One-to-One Relationship**
- Each enrollment record should correspond to a grade record to track the student's performance in that course.
- **Primary Key:** EnrollmentID (Enrollment)
- **Foreign Key:** EnrollmentID (Grades)





CHAPTER

4

> 4.1 Understanding Data Types



When designing tables in Microsoft Access, it's essential **to assign a data type to each column**. The Short Text data type is a common choice since it allows the entry of letters, numbers, and symbols. However, selecting the appropriate data type enhances database functionality, enabling features like data validation and built-in functions while ensuring greater accuracy in stored information.

The following table provides an overview of the data types available in Access desktop databases (.accdb and .mdb).

Data Type	Description	Example
Short Text	Stores alphanumeric characters (letters, numbers, symbols) with a maximum length of 255 characters.	Names, phone numbers, addresses
Long Text	Stores large amounts of text (up to 64,000 characters).	Comments, descriptions, notes
Number	Stores numeric values used in mathematical calculations.	Age, quantity, product stock
Large Number	Stores very large numeric values (available in .accdb format).	Scientific calculations, financial data
Date/Time	Stores date and time values.	Birthdate, meeting time
Currency	Stores monetary values with currency formatting.	Salary, product price
AutoNumber	Generates a unique number automatically for each record.	Customer ID, Order ID

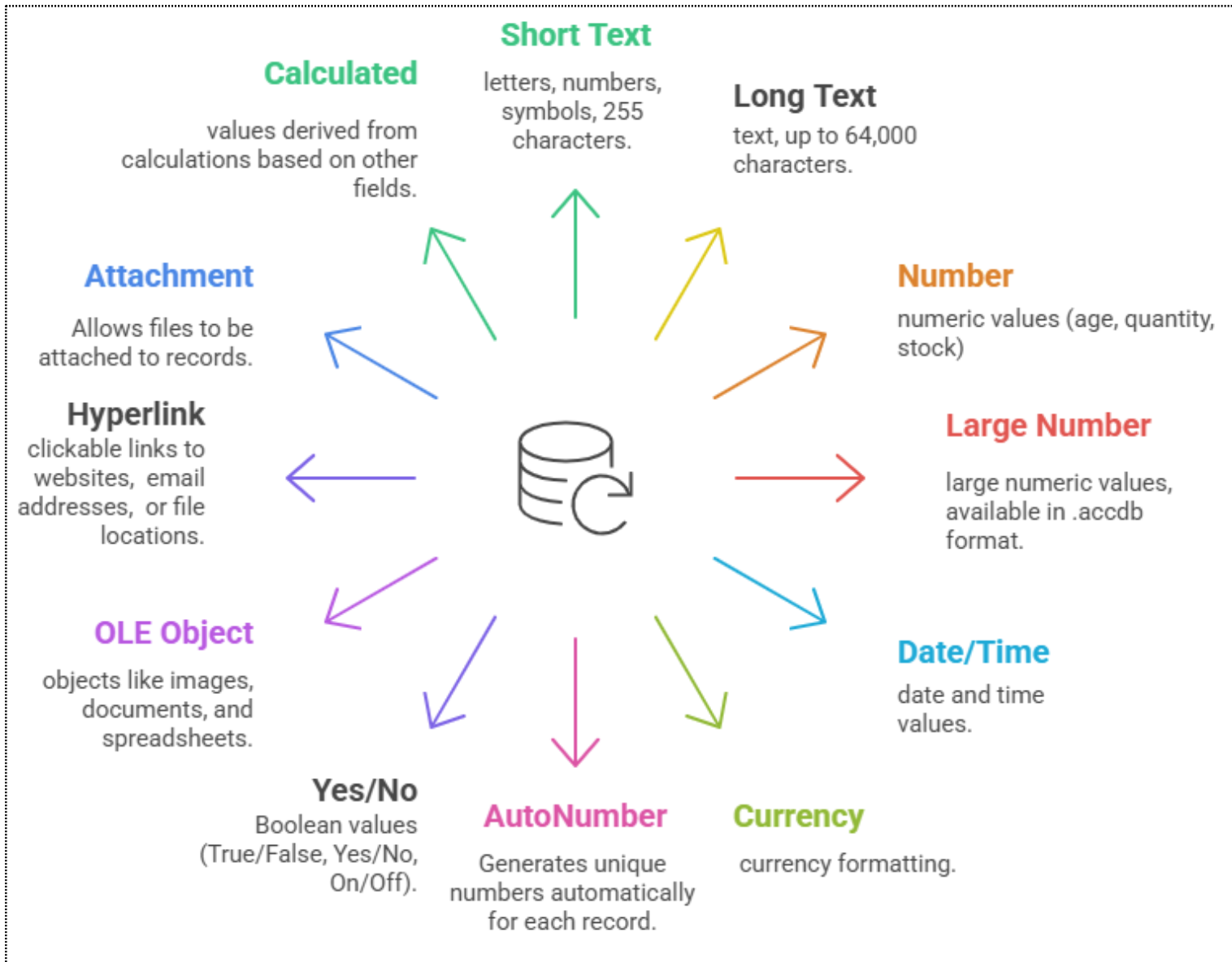


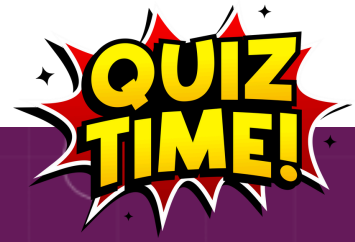
4.0 CREATING TABLES

Data Type	Description	Example
Yes/No	Stores Boolean values (True/False, Yes/No, On/Off).	Active status, subscription confirmation
OLE Object	Stores objects like images, Word documents, and Excel spreadsheets.	Employee photos, scanned documents
Hyperlink	Stores clickable links to websites, email addresses, or file locations.	Website URLs, email contacts
Attachment	Allows files (images, PDFs, documents) to be attached to records.	Product images, scanned receipts
Calculated	Stores values derived from a calculation based on other fields	Total price = Quantity × Unit Price



Data Types





QUIZIZZ

Understanding Data Types in Ms Access

Created by • Nurul Huda



> 4.2 Basic Creating Tables in Microsoft Access with AR



CREATING TABLE



> 4.3 Creating Tables in Microsoft Access



To understand how to build a system in Access, it is essential to familiarize yourself with its core components:

Step-by-step guide to creating the required tables:



Students Table

Stores student details essential for database management



Courses Table

Stores course information to facilitate academic tracking



Enrollment Table

Tracks student enrollments to monitor course participation



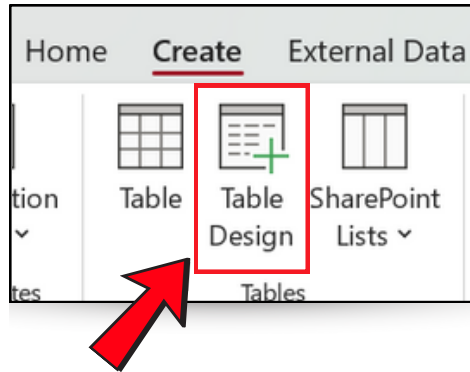
Grades Table

Records student grades to assess academic performance



STEP 1 Create the "Students" Table

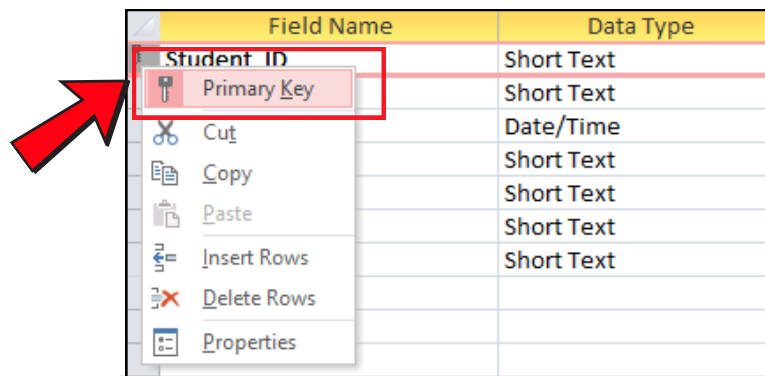
1. Open **Microsoft Access** and create a **Blank Database**.
2. Click **Table Design** to create a **new table**.



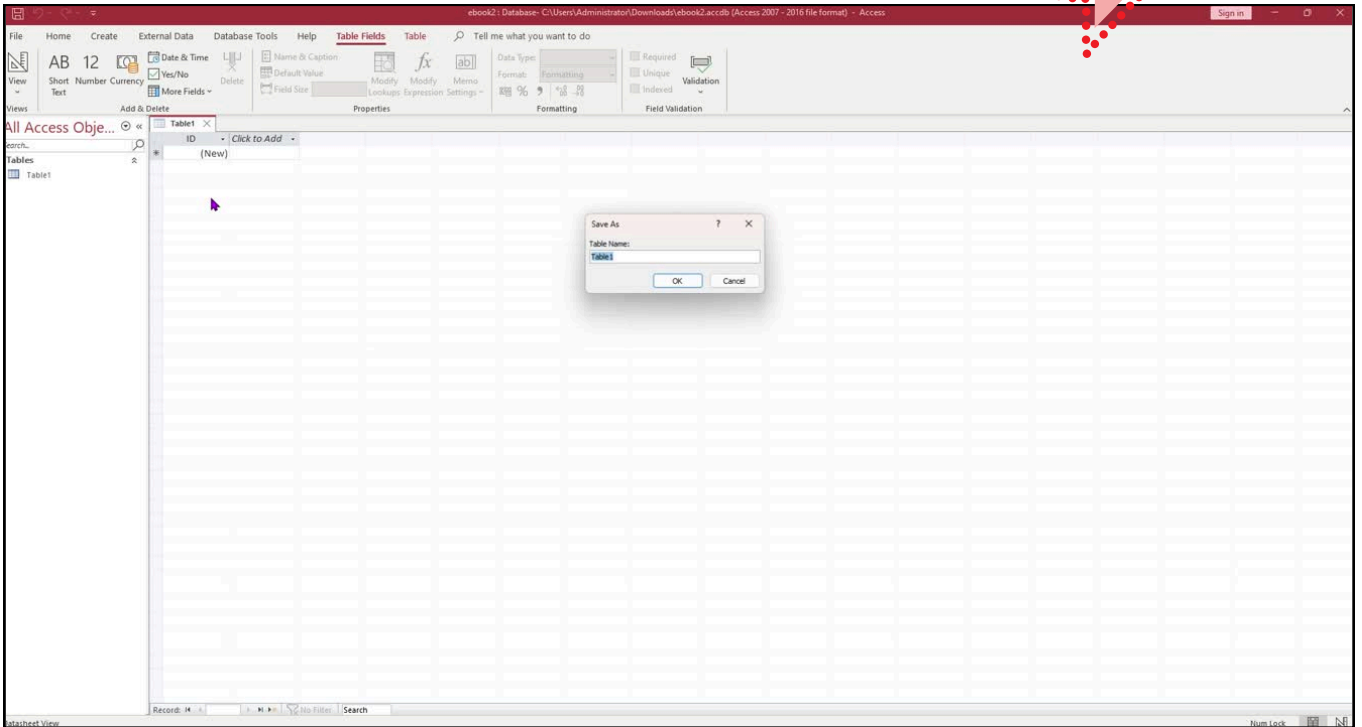
3. **Define** the fields as follows:

Field Name	Data Type	Description (Optional)
Student_ID	Short Text	Unique ID for each student
Name	Short Text	Student's name
DOB	Date/Time	Date Of Birth
Gender	Short Text	Male/Female
Address	Short Text	Student's home address
Contact_Number	Short Text	Phone Number
Email	Short Text	Email address

4. Set **Student_ID** as the **Primary Key** (Right-click → **Primary Key**).



5. To save your **Table**, click the **Save** button on the Quick Access Toolbar or right click on the report's tab > select **Save**. When prompted, enter a name for your table and then click OK. For this table, name the table as **Students** and close it.



STEP 2 Create the "Courses" Table

1. Open **Table Design View**.
2. **Define** the fields as follows:

Field Name	Data Type	Description (Optional)
Course_ID	Short Text	Unique ID for each course
CourseName	Short Text	Name of the course
CourseCode	Short Text	Course code (e.g., SFC10393)
Instructor	Short Text	Name of the instructor

3. Set **Course_ID** as the **Primary Key**. (Right-click → **Primary Key**).
4. Click **Save**, name the table **Courses**, and close it.



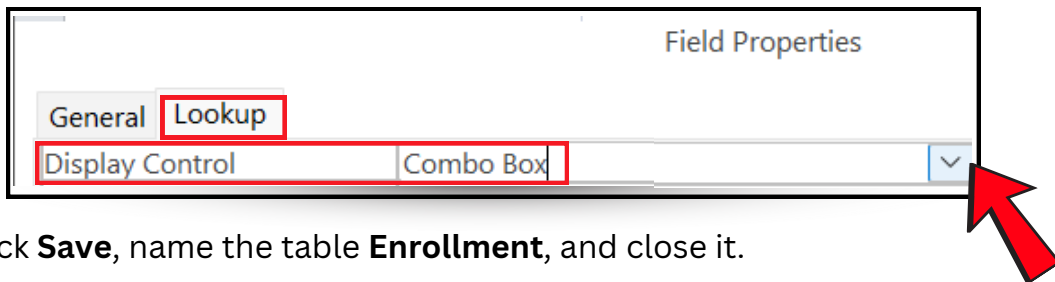


STEP 3 Create the "Enrollment" Table

1. Open **Table Design View**.
2. **Define** the fields as follows:

Field Name	Data Type	Description (Optional)
EnrollmentID	AutoNumber	Unique ID for each enrollment record
Student_ID	Short Text	Links to Student_ID in "Students" table
Course_ID	Short Text	Links to Course_ID in "Courses" table
EnrollmentDate	Date/Time	Date the student enrolled

3. Set **EnrollmentID** as the **Primary Key**. (Right-click → **Primary Key**).
4. Now, we want to set the **Student_ID** and **Course_ID** as **Foreign Keys** by:
 - Clicking on the **Lookup** tab under Field Properties.
 - Choosing **Display Control** → **Combo Box** to allow selection from Students and Courses tables.



5. Click **Save**, name the table **Enrollment**, and close it.



STEP 4 Create the "Grades" Table

1. Open **Table Design View**.
2. **Define** the fields as follows:

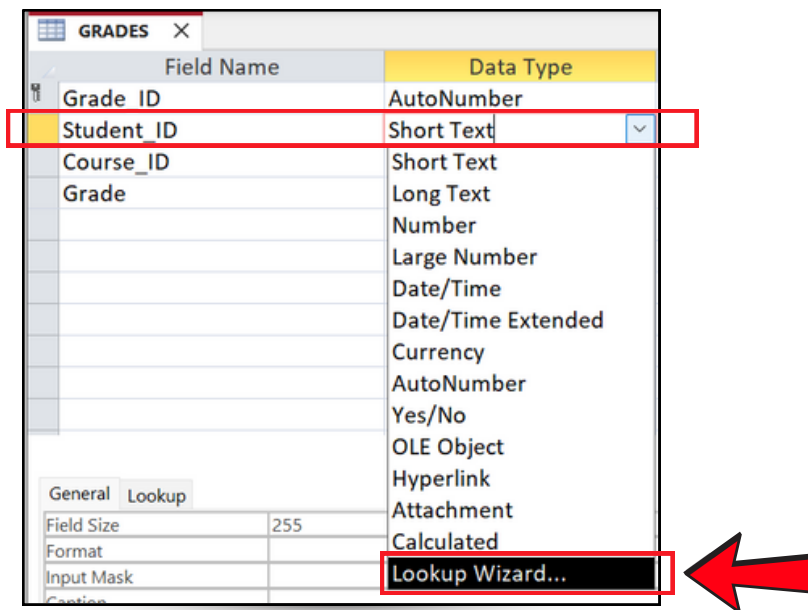
Field Name	Data Type	Description (Optional)
Grade_ID	AutoNumber	Unique ID for each grade entry
Student_ID	Short Text	Links to Student_ID in "Students" table
Course_ID	Short Text	Links to Course_ID in "Courses" table
Grade	Short Text	Grade (e.g., A, B, C, etc.)

3. Set **GradeID** as the **Primary Key**. (Right-click → **Primary Key**).
4. Now, this time, we want to set **Student_ID** and **Course_ID** as **Foreign Keys** using the **Lookup Wizard**.

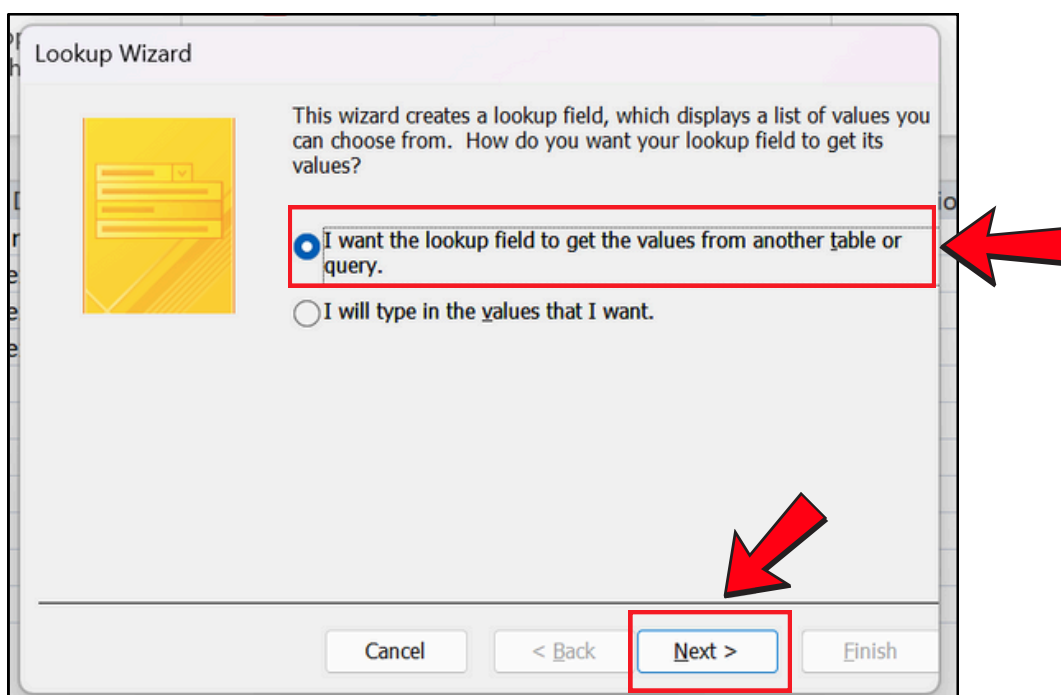


HOW?

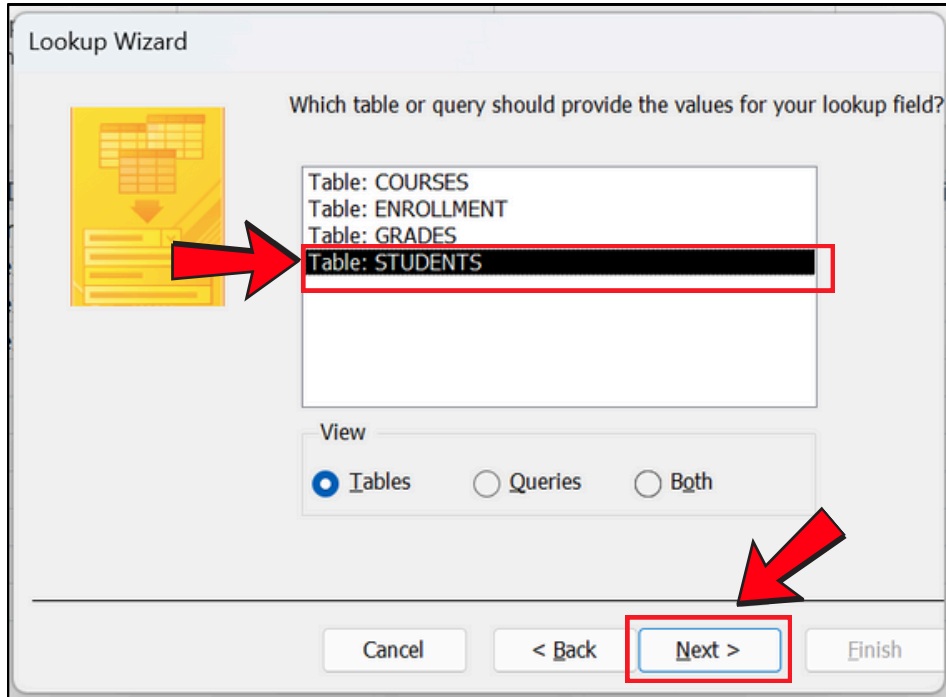
- In the **Data Type** column for **Student_ID** field, click the dropdown and select **Lookup Wizard**.



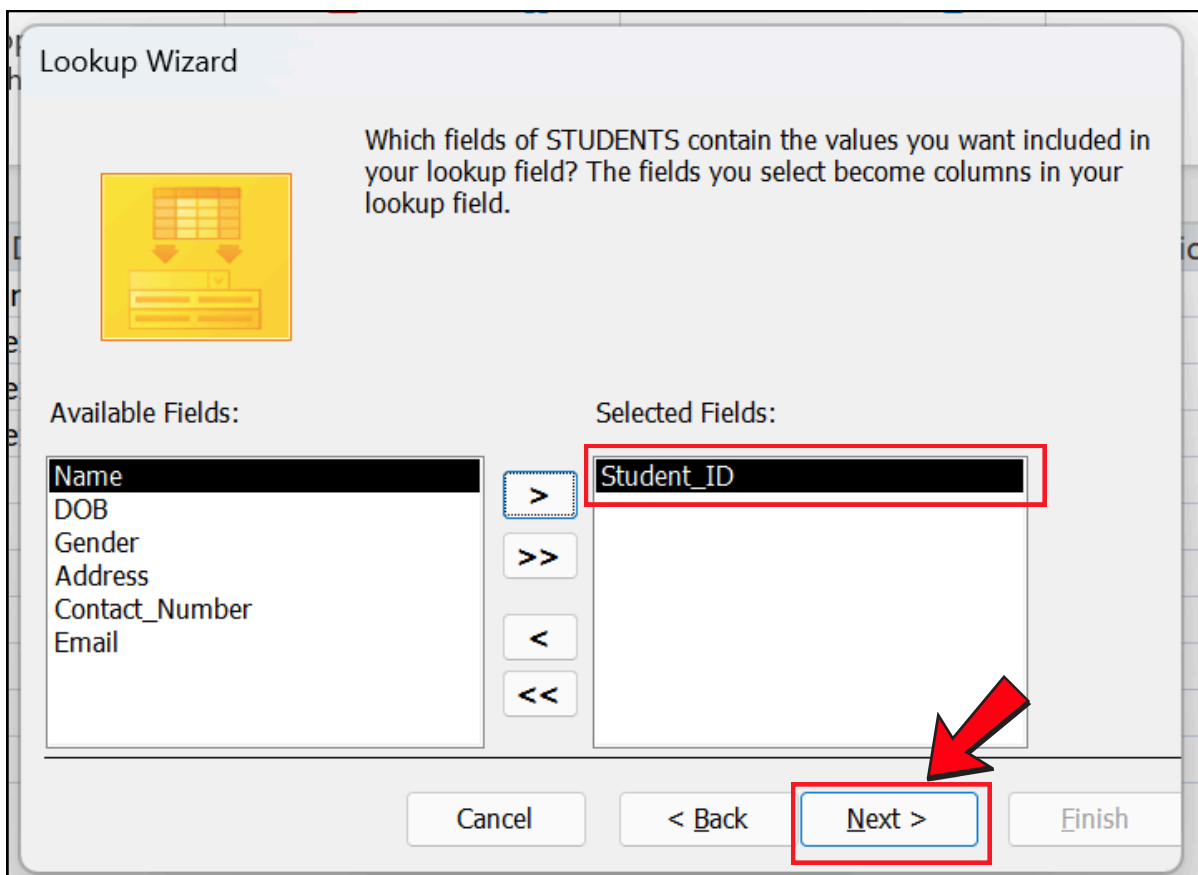
- In the Lookup Wizard, select “I want the lookup field to get the values from another table or query.” Click **Next**.



➡ Choose the table that contains **Student_ID** (e.g., **Students Table**). Click **Next**.



➡ Select **Student_ID** as the field to be used for the lookup. Click **Next**.



Optionally, adjust sorting order and column width. Click **Next**.

Lookup Wizard

What sort order do you want for the items in your list box?

You can sort records by up to four fields, in either ascending or descending order.

1		Ascending
2	Student_ID	Ascending
3		Ascending
4		Ascending

Cancel < Back **Next >** Finish

Choose whether to **store** just the **ID number** or **show additional fields** (e.g., Student Name). Click **Next**.

Lookup Wizard

How wide would you like the columns in your lookup field?

To adjust the width of a column, drag its right edge to the width you want, or double-click the right edge of the column heading to get the best fit.

Student_ID

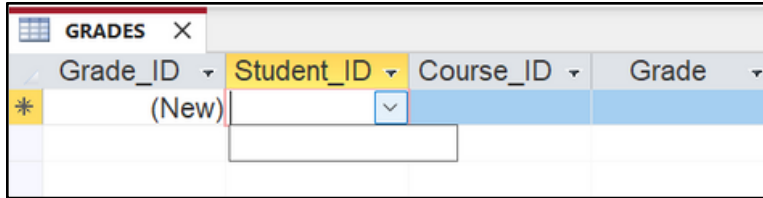
Cancel < Back **Next >** Finish

Click **Finish** to complete the setup.

Repeat the same steps for **Course_ID**, selecting values from the **Courses Table**.



- 5. Click **Save**, name the table **Grades**, and close it.
- 6. **Open** the **Datasheet View** of your table and check that the lookup fields work correctly by selecting values from the dropdown.



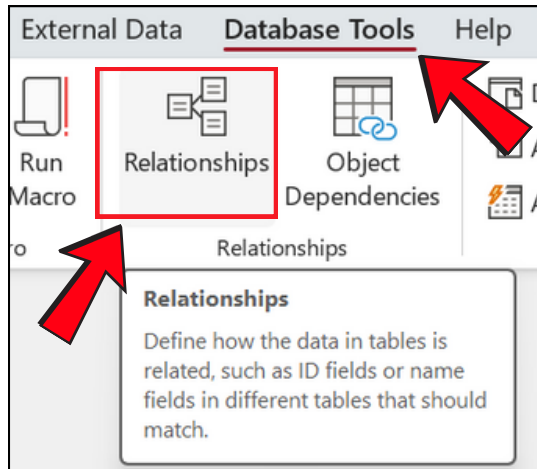
Now, **Student_ID** and **Course_ID** are **Foreign Keys** referencing the **Students Table** and **Courses Table**, respectively.



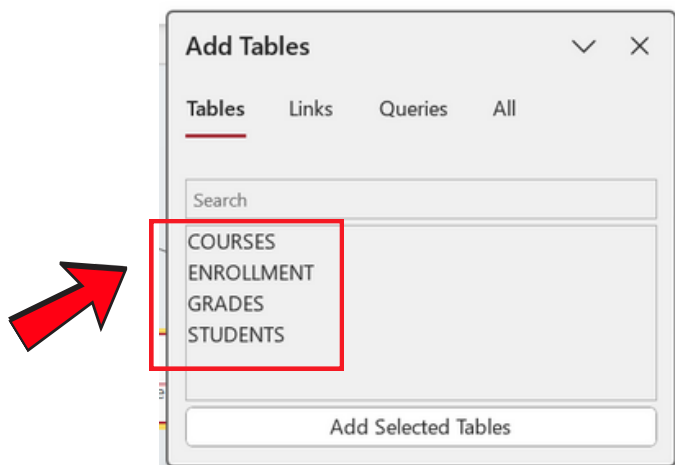
STEP 5

Establish Relationships Between Tables

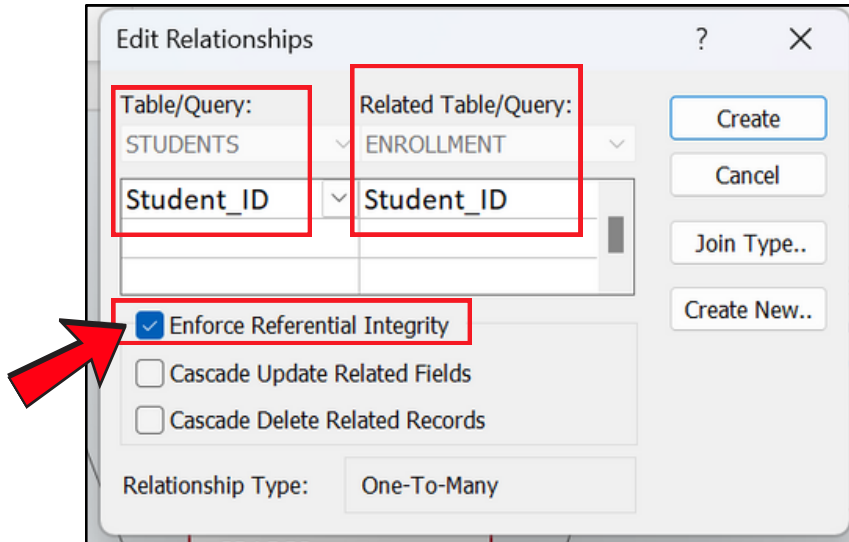
Click on **Database Tools** → **Relationships**.



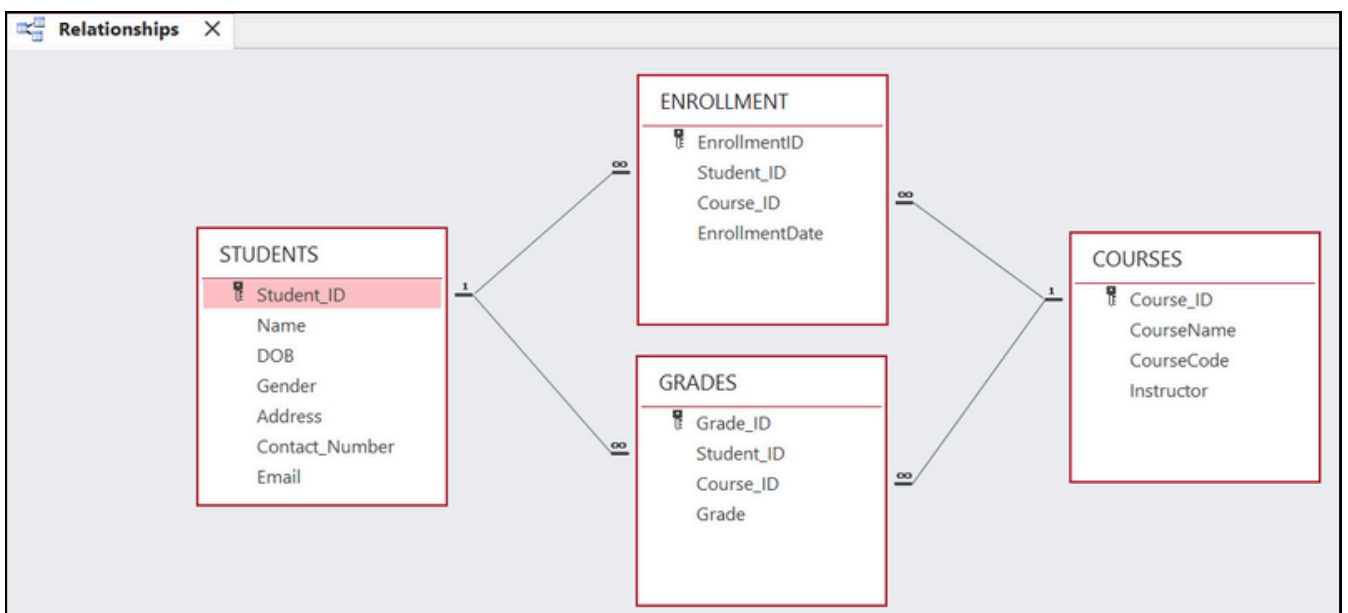
Add the **Students**, **Courses**, **Enrollment**, and **Grades** tables



- Drag **Student_ID** from the **Students** table to **StudentID** in the **Enrollment** table (One-to-Many).



- Check **Enforce Referential Integrity** and click **Create**.
- Drag **Course_ID** from the **Courses** table to **CourseID** in the **Enrollment** table (One-to-Many).
- Drag **Student_ID** from the **Students** table to **StudentID** in the **Grades** table (One-to-Many).
- Drag **Course_ID** from the **Courses** table to **CourseID** in the **Grades** table (One-to-Many).
- Check **Enforce Referential Integrity** and click **Create**.



- Click **Save** to store the relationships





CHAPTER 5

5.1 Importance of Forms



Creating forms in your database helps to make data entry easier and more user-friendly. Forms can be customized and designed to suit the structure of your database and to provide a clear and organized way for users to input information.

5.2 Creating Forms for the Student Management System



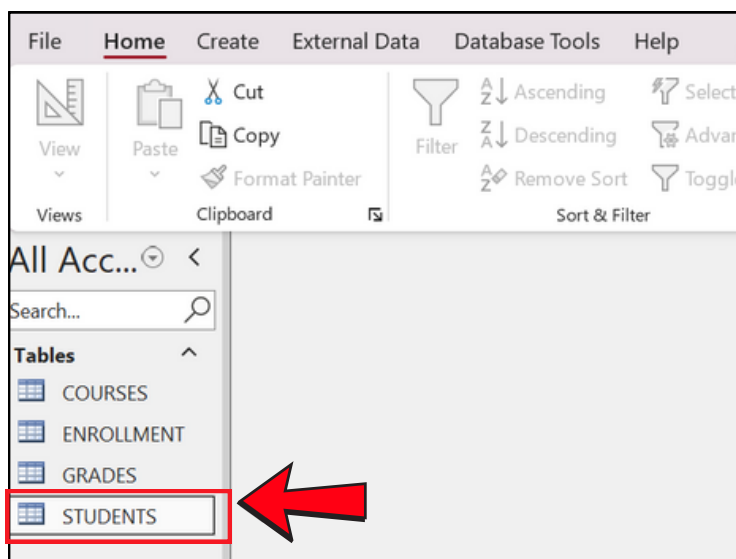
STEP 1

Create a Form for Student Details

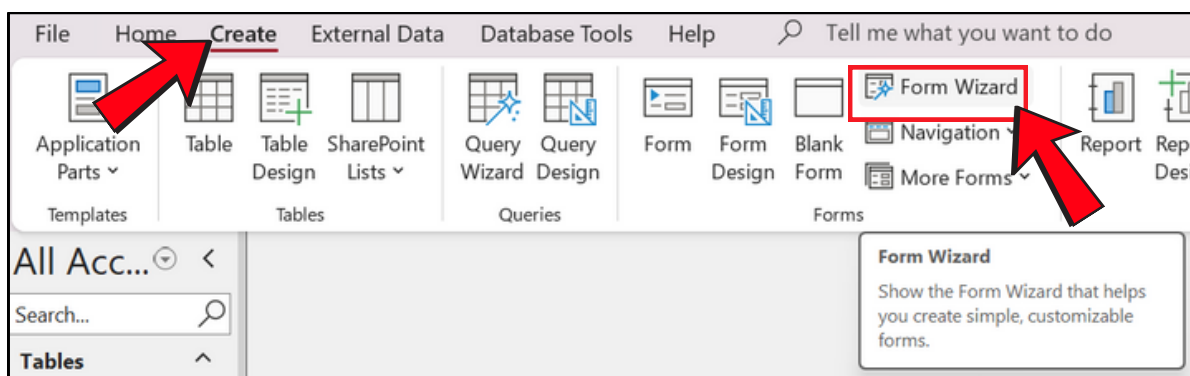
This form will allow users to enter and view student information.

Method 1: Using the Form Wizard

1. **Open Microsoft Access** and go to the **Navigation Pane**.
2. **Select the Students Table** (which contains fields like StudentID, Name, Contact Number etc).



3. **Click on the Create tab** in the ribbon and **click Form Wizard**.



4. In the wizard, select all fields from the **Students Table** and click **Next**.

Form Wizard

Which fields do you want on your form?
You can choose from more than one table or query.

Tables/Queries
Table: STUDENTS

Available Fields:

Selected Fields:
Student_ID
Name
DOB
Gender
Address
Contact_Number
Email

Cancel < Back **Next >** Finish

5. Choose a layout (e.g., Columnar) and click **Next**.

Form Wizard

What layout would you like for your form?

Columnar
 Tabular
 Datasheet
 Justified

Cancel < Back **Next >** Finish



6. Name the form (e.g., **Student Form**) and click **Finish**.

Form Wizard

What title do you want for your form?

STUDENT FORM

That's all the information the wizard needs to create your form.

Do you want to open the form or modify the form's design?

Open the form to view or enter information.

Modify the form's design.

Cancel < Back Next > Finish

Now, your **STUDENT FORM** is created and opened in Form View

STUDENT FORM

Student ID

Name

DOB

Gender

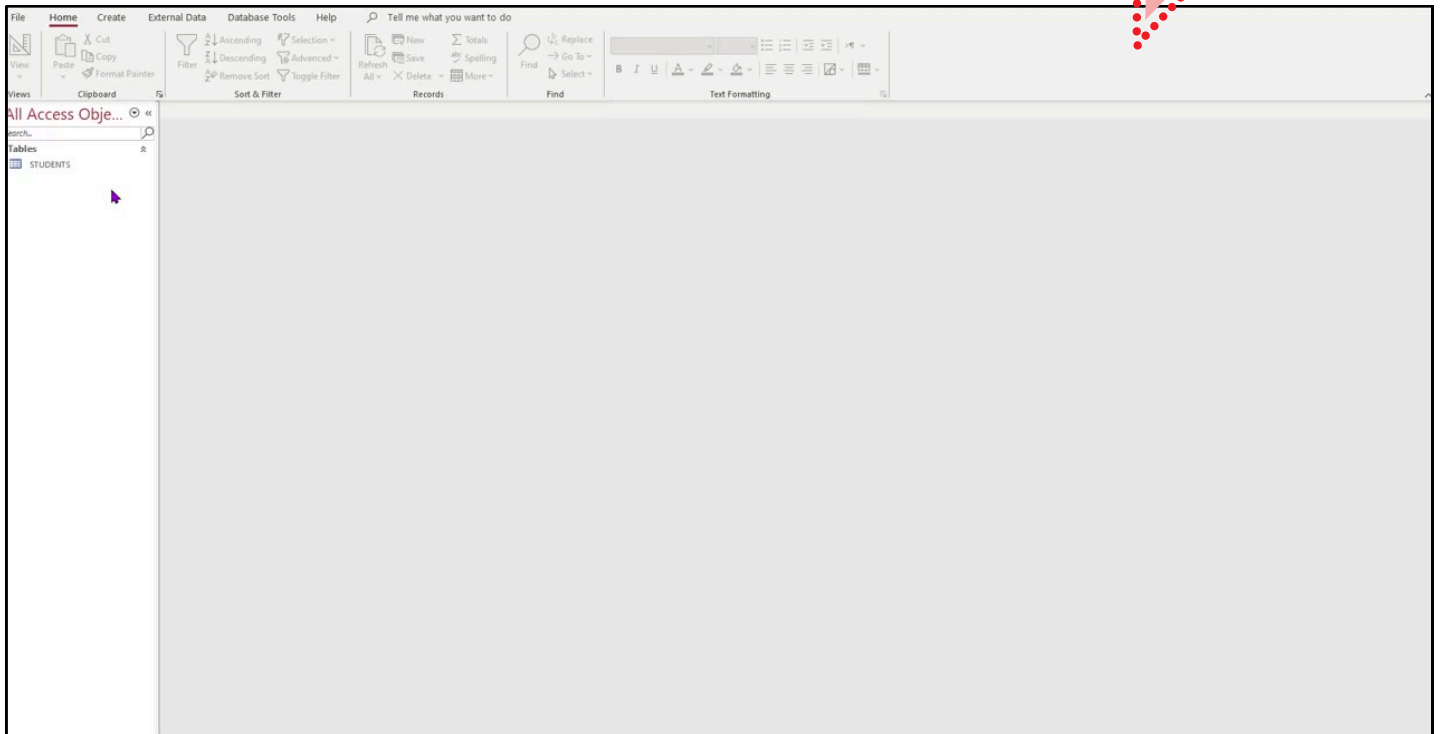
Address

Contact Number

Email

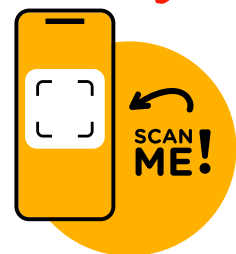
Record: 1 of 1 No Filter Search





➤ Scan to discover the step-by-step guide to creating a form with AR

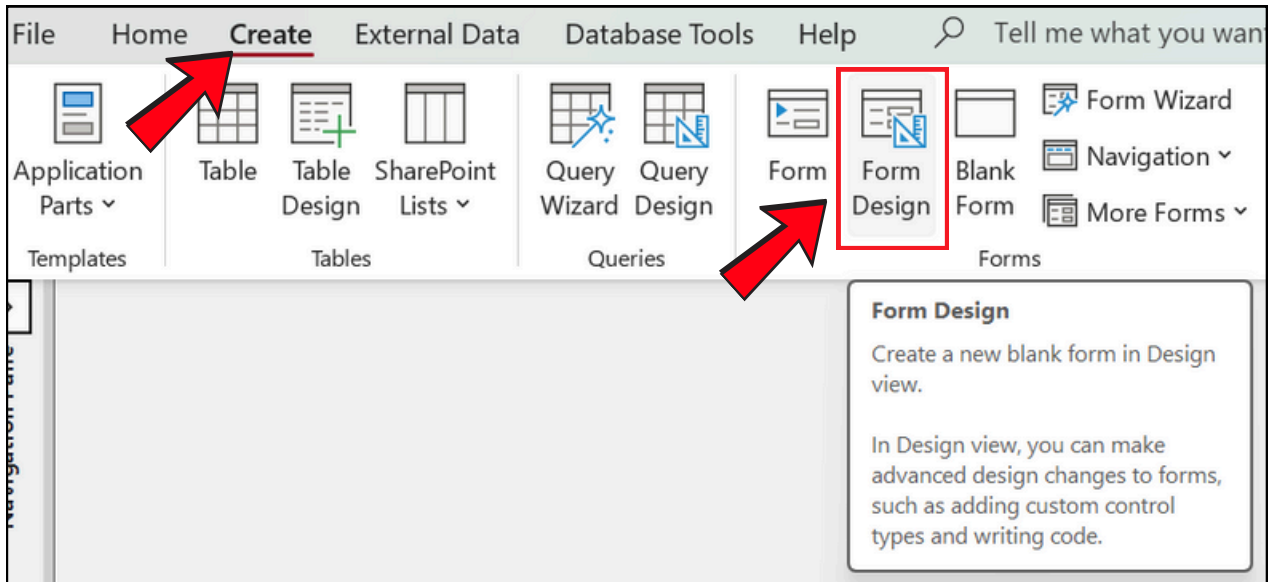
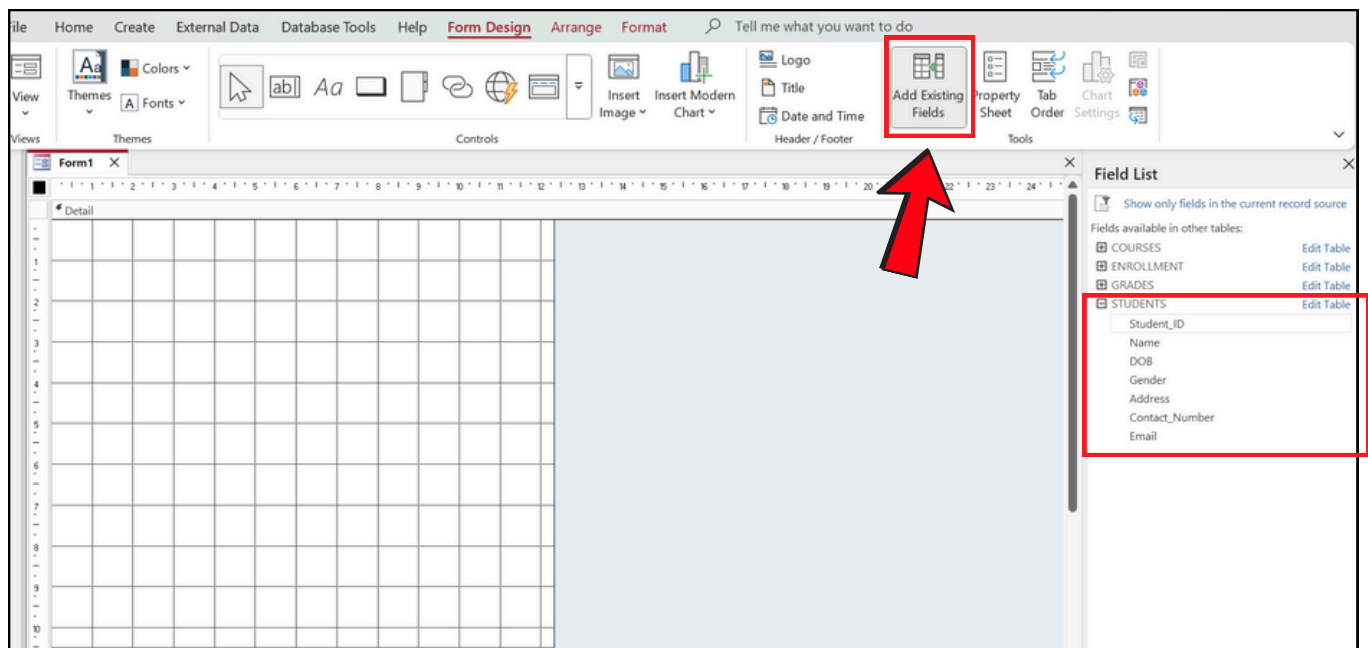
CREATING FORM



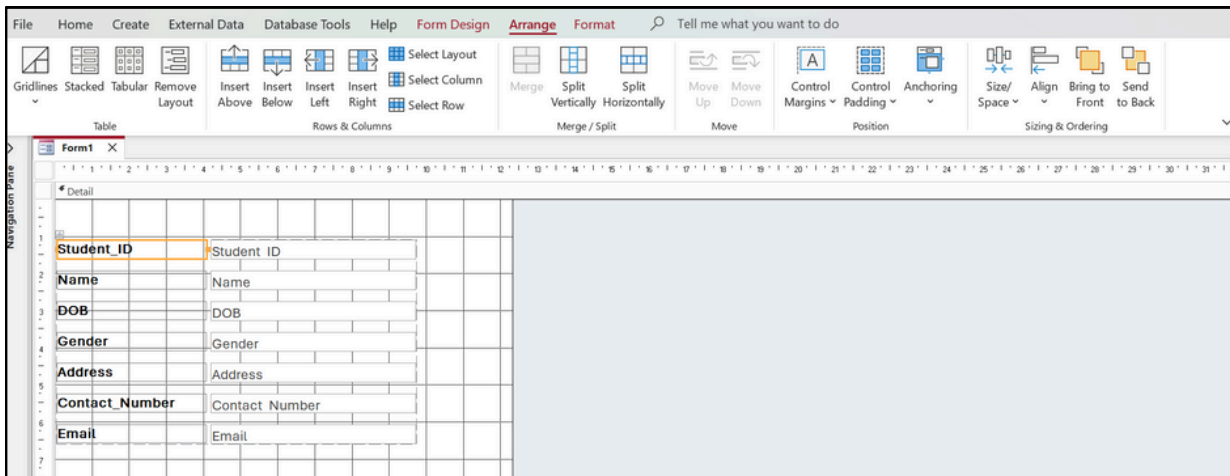
Method 2: Using the Form Design View



1. Go to the Create Tab → Click Form Design.

2. Click **Add Existing Fields** in the ribbon, then drag the fields from the **Students Table** onto the form.

3. Use the **Design Tools** to arrange labels and fields neatly.



4. To save your form, click the **Save** button on the Quick Access Toolbar or right click on the form's tab > select **Save**. When prompted, enter a name for your form and then click OK. In this practical, you can save the form as **Student Form**.



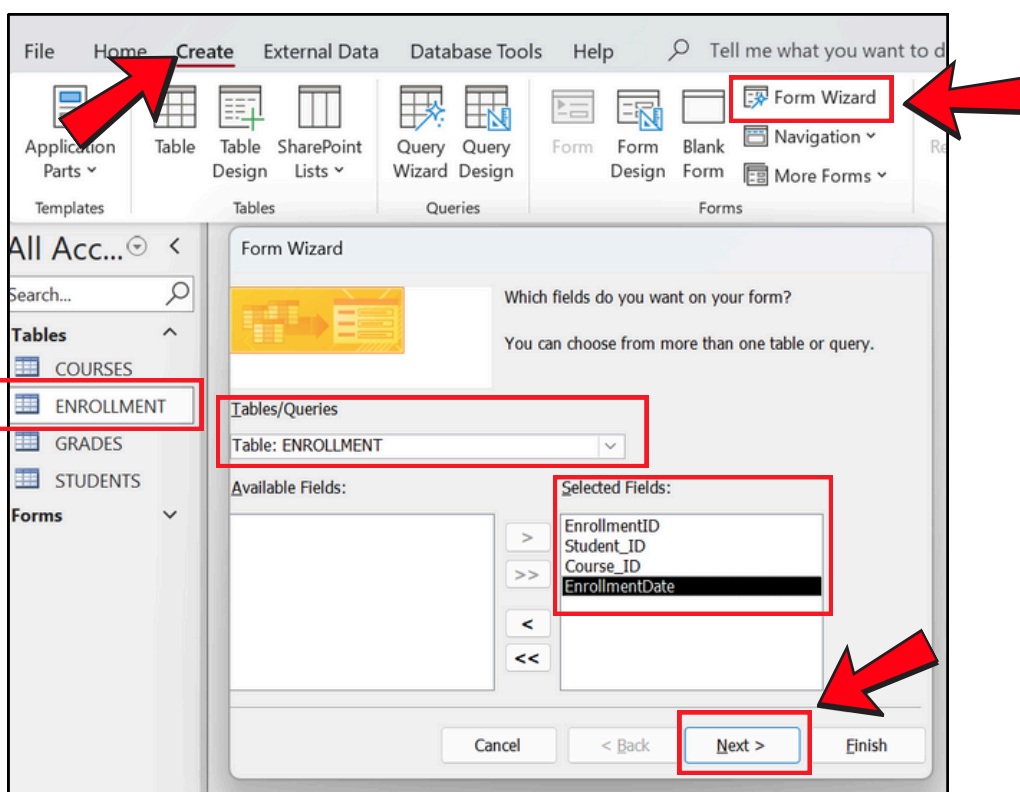
STEP 2

Create a Form for Course Enrollment

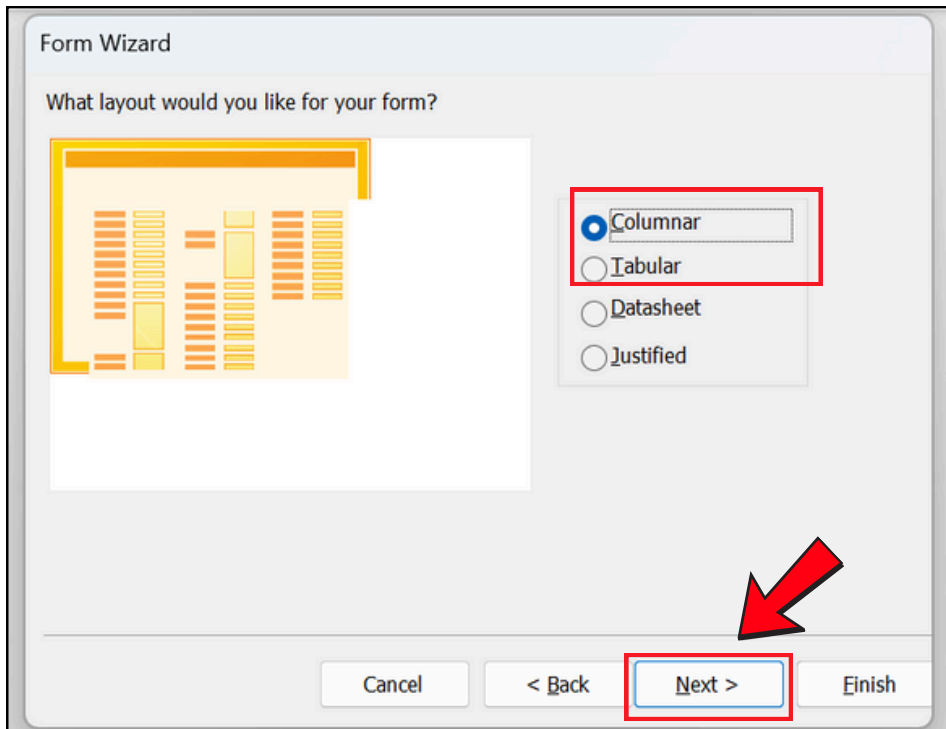
This form will allow users to enroll students in courses.

Using the Form Wizard

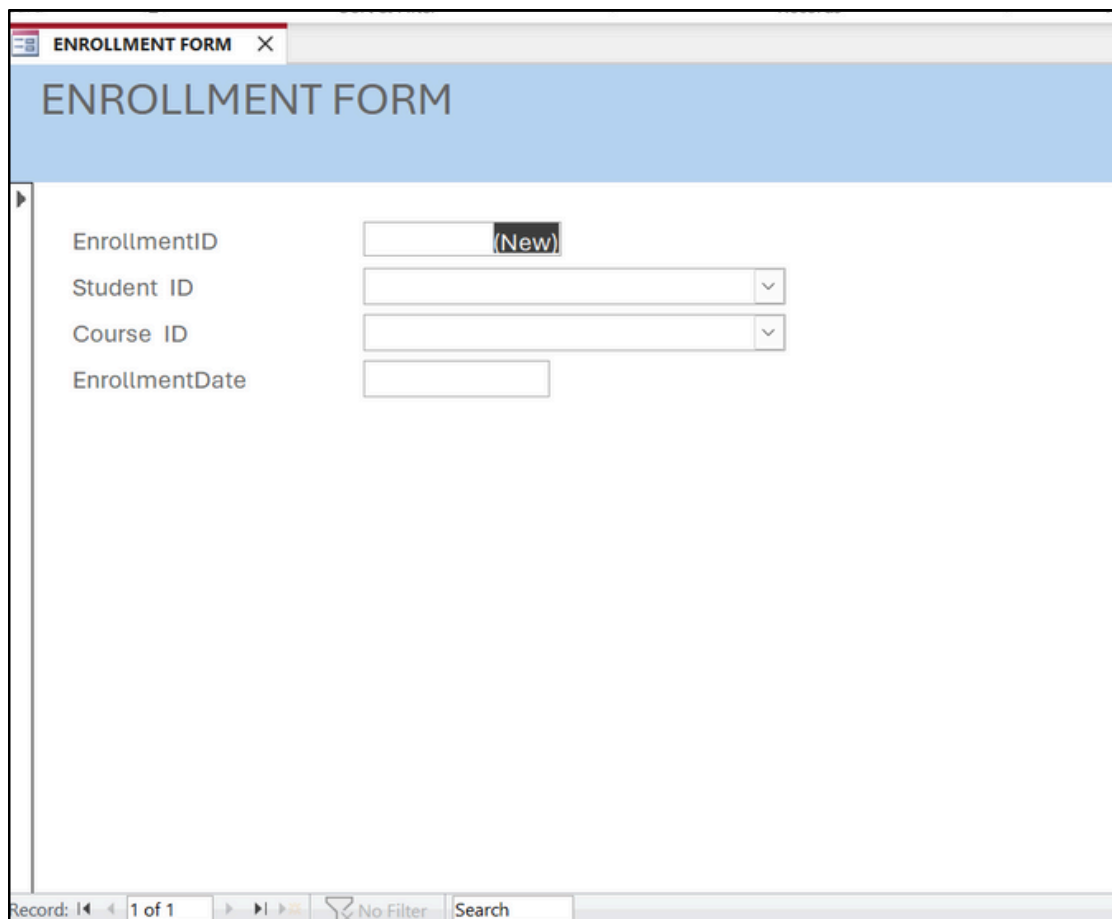
1. **Select** the **Enrollments Table** (which includes StudentID, CourseID, and EnrollmentDate).
2. Go to **Create > Form Wizard**.
3. **Choose all fields** from the **Enrollments Table** and click **Next**.



4. Select a **Tabular** or **Columnar** layout and click **Next**.

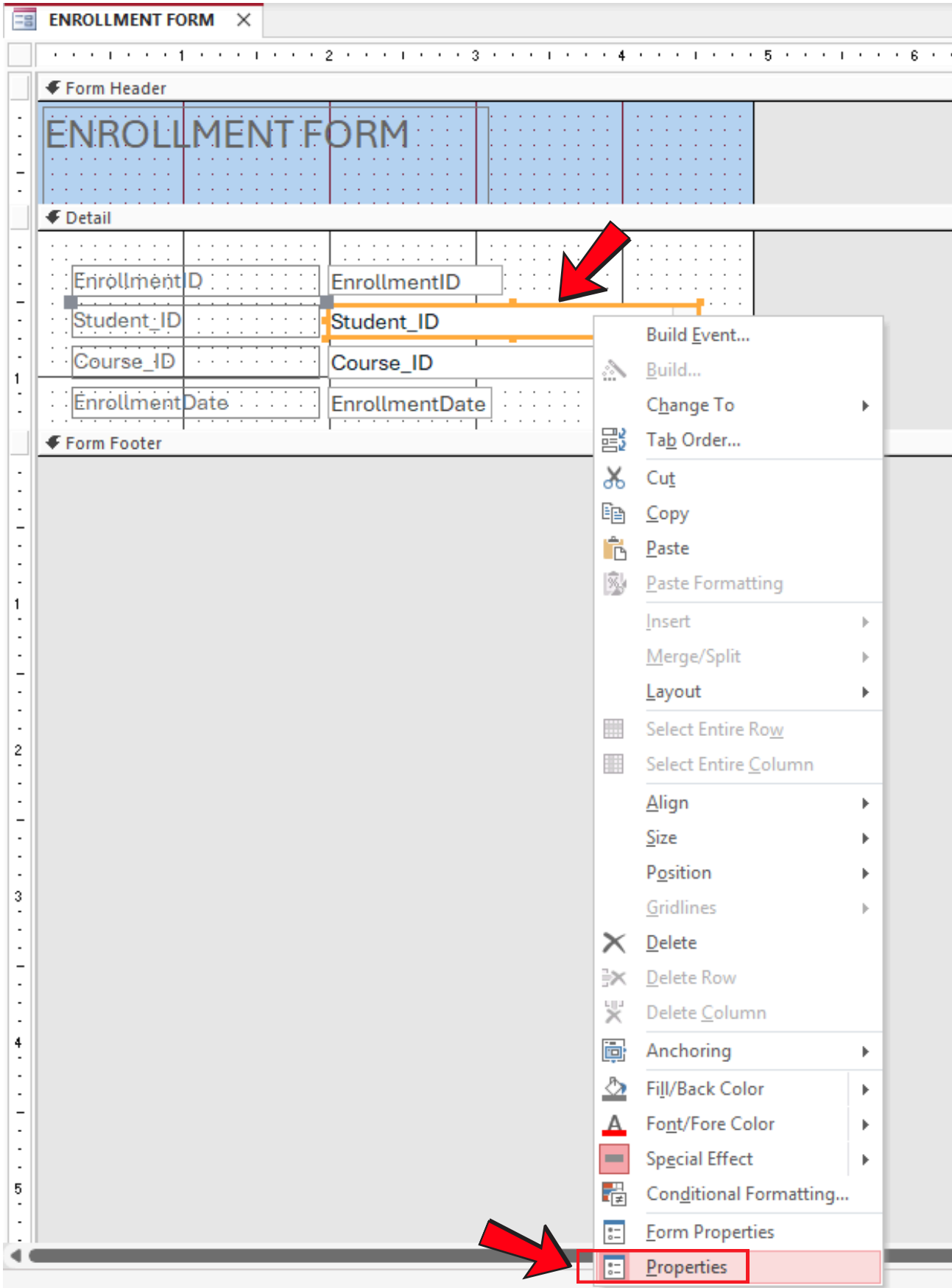


5. Name the form as **Enrollment Form** and click **Finish**.



➤ To add a Combo Box for StudentID: 

1. Open the **Enrollment Form** in **Design View**.
2. **Right click** on **StudentID** Field, then go to **Properties**.



The screenshot shows the Microsoft Access Design View for an "ENROLLMENT FORM". The form is divided into sections: Form Header, Detail, and Form Footer. The Detail section contains four fields: EnrollmentID, Student_ID, Course_ID, and EnrollmentDate. A red arrow points to the Student_ID field, indicating it is the target of the right-click action. A context menu is open over the Student_ID field, listing various options. The "Properties" option at the bottom of the menu is highlighted with a red box and a red arrow, indicating the next step in the process.

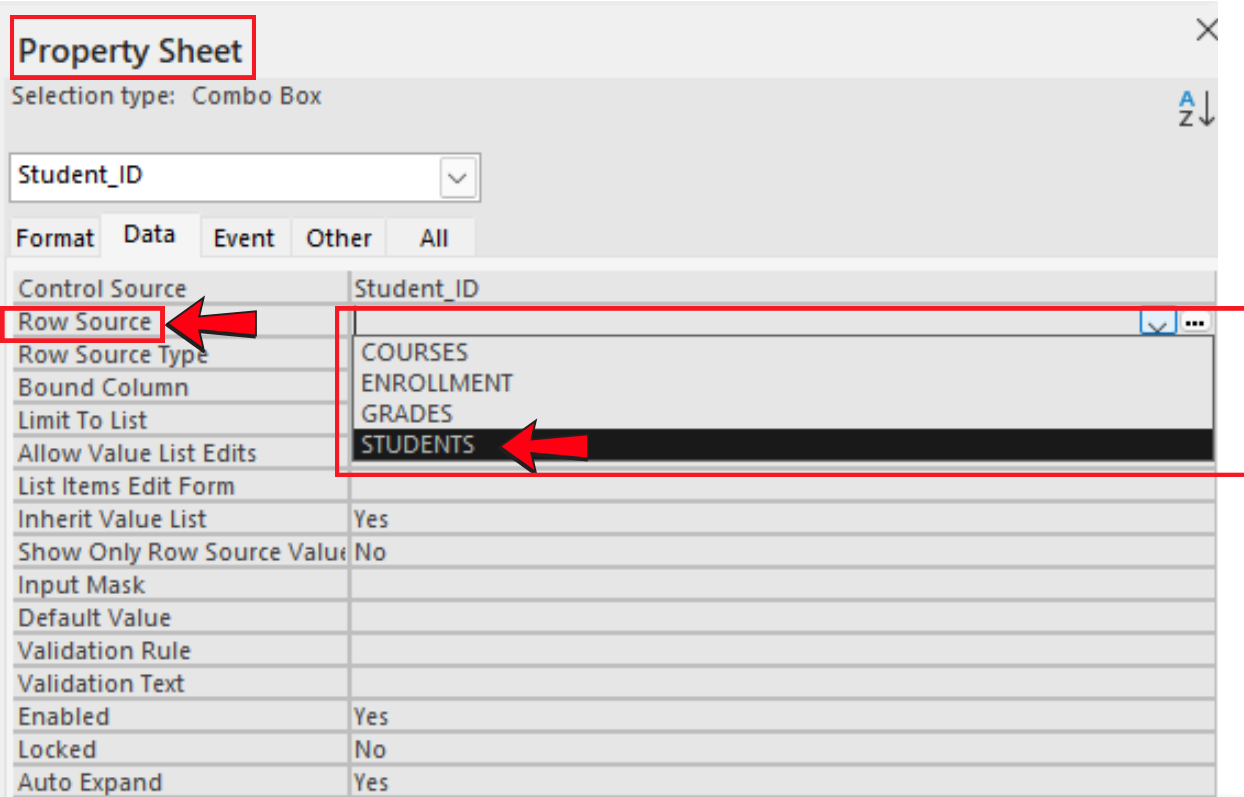
Form Header	
ENROLLMENT FORM	

Detail	
EnrollmentID	EnrollmentID
Student_ID	Student_ID
Course_ID	Course_ID
EnrollmentDate	EnrollmentDate

Form Footer	

- Build Event...
- Build...
- Change To
- Tab Order...
- Cut
- Copy
- Paste
- Paste Formatting
- Insert
- Merge/Split
- Layout
- Select Entire Row
- Select Entire Column
- Align
- Size
- Position
- Gridlines
- Delete
- Delete Row
- Delete Column
- Anchoring
- Fill/Back Color
- Font/Fore Color
- Special Effect
- Conditional Formatting...
- Form Properties
- Properties

3. On the **Property Sheet**, Set the **Row Source** to **STUDENTS**.



The screenshot shows the Property Sheet for a Combo Box control. The 'Control Source' is 'Student_ID'. The 'Row Source' property is highlighted with a red box and a red arrow pointing to the 'STUDENTS' option in the dropdown list. The 'Row Source Type' is set to 'Table/Query'. The 'Bound Column' is 'Student_ID'. The 'Limit To List' is 'All'. The 'Allow Value List Edits' is 'Yes'. The 'List Items Edit Form' is 'None'. The 'Inherit Value List' is 'Yes'. The 'Show Only Row Source Values' is 'No'. The 'Input Mask' is 'None'. The 'Default Value' is 'None'. The 'Validation Rule' is 'None'. The 'Validation Text' is 'None'. The 'Enabled' property is 'Yes'. The 'Locked' property is 'No'. The 'Auto Expand' property is 'Yes'.

Property	Value
Control Source	Student_ID
Row Source	STUDENTS
Row Source Type	Table/Query
Bound Column	Student_ID
Limit To List	All
Allow Value List Edits	Yes
List Items Edit Form	None
Inherit Value List	Yes
Show Only Row Source Values	No
Input Mask	None
Default Value	None
Validation Rule	None
Validation Text	None
Enabled	Yes
Locked	No
Auto Expand	Yes

4. **Save** the changes.

5. **Repeat** for **CourseID** (using the Courses Table).

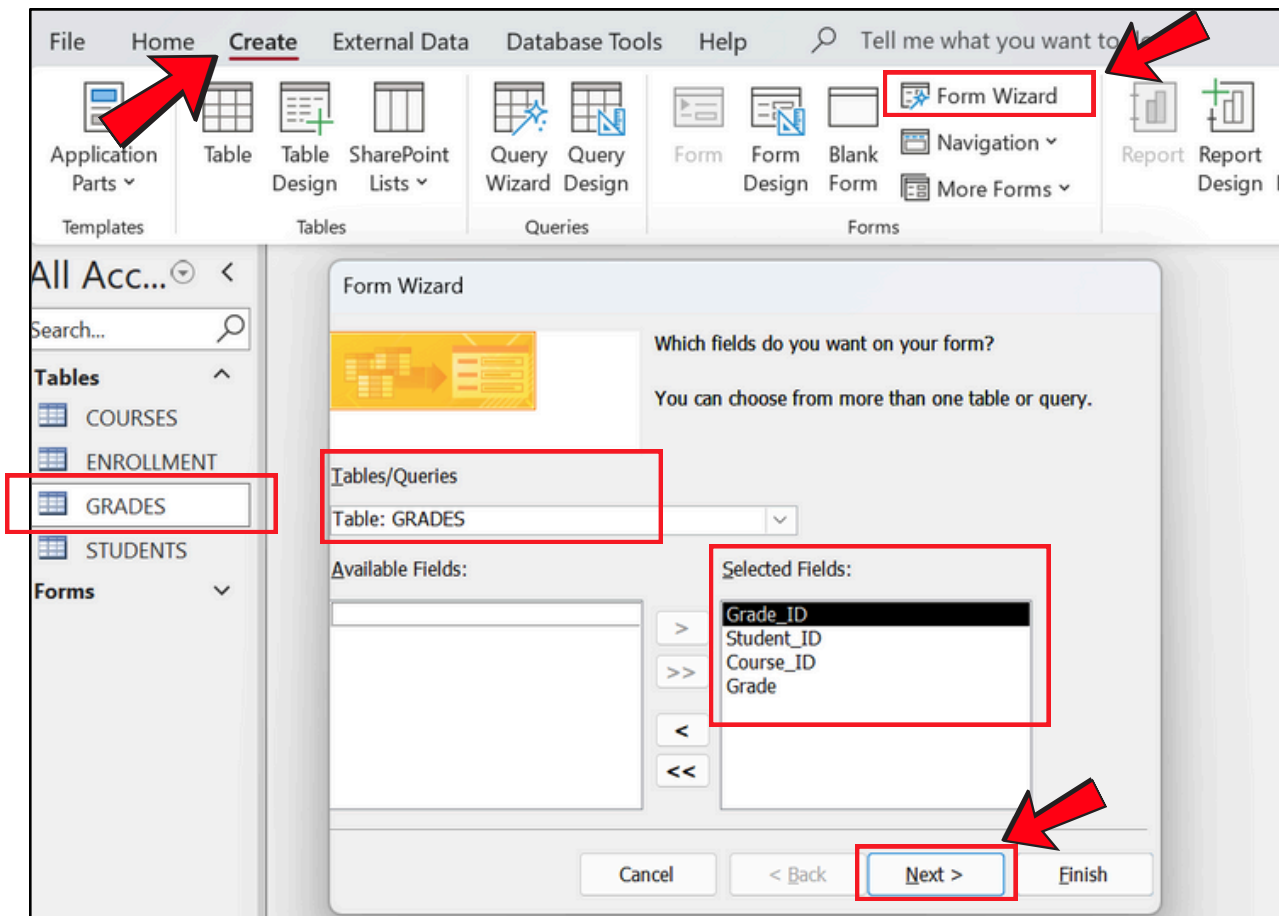


STEP 3

Create a Form for Recording Student Grades

This form will allow users to enter student grades for each course.

1. **Select** the **Grades Table** (which includes StudentID, CourseID, and Grade).
2. Click on the **Create** tab in the ribbon and click **Form Wizard**.
3. Choose all fields from the **Grades Table** and click **Next**.



4. Select a **Datasheet** or **Columnar Layout** and click **Next**.

Form Wizard

What layout would you like for your form?

Columnar

Tabular

Datasheet

Justified

Cancel < Back Next > Finish

5. Name the form as **Student Grades Form** and click **Finish**.

Student Grades Form

Grade ID (New)

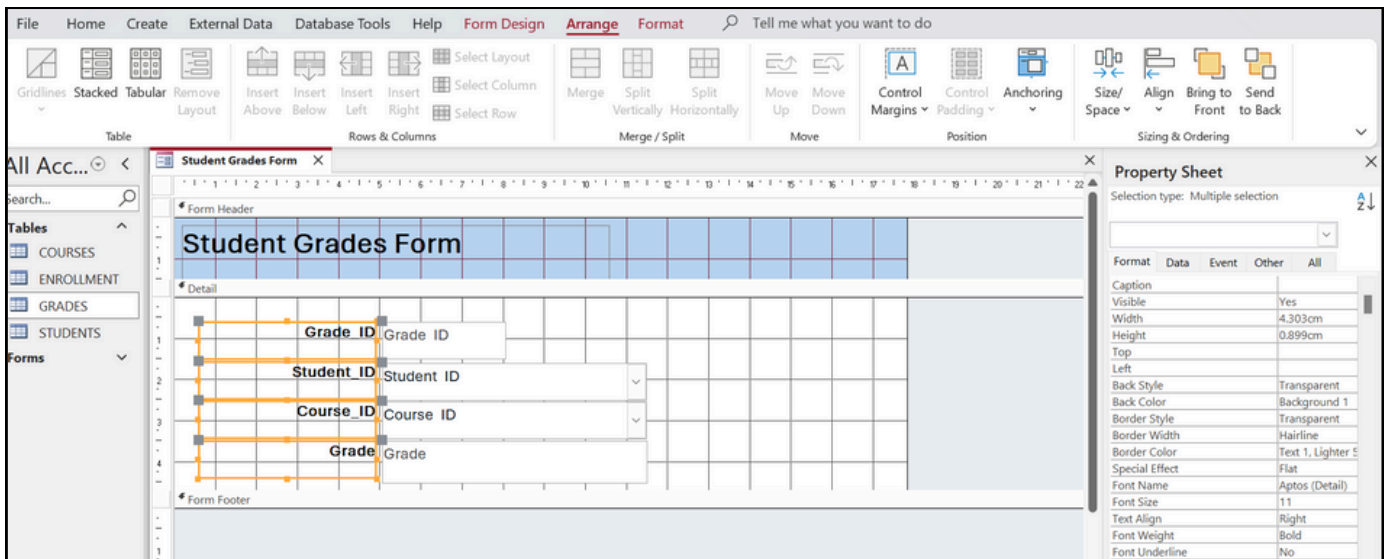
Student ID

Course ID

Grade



6. Open the form in **Design View** and adjust the layout as needed.



STEP 4

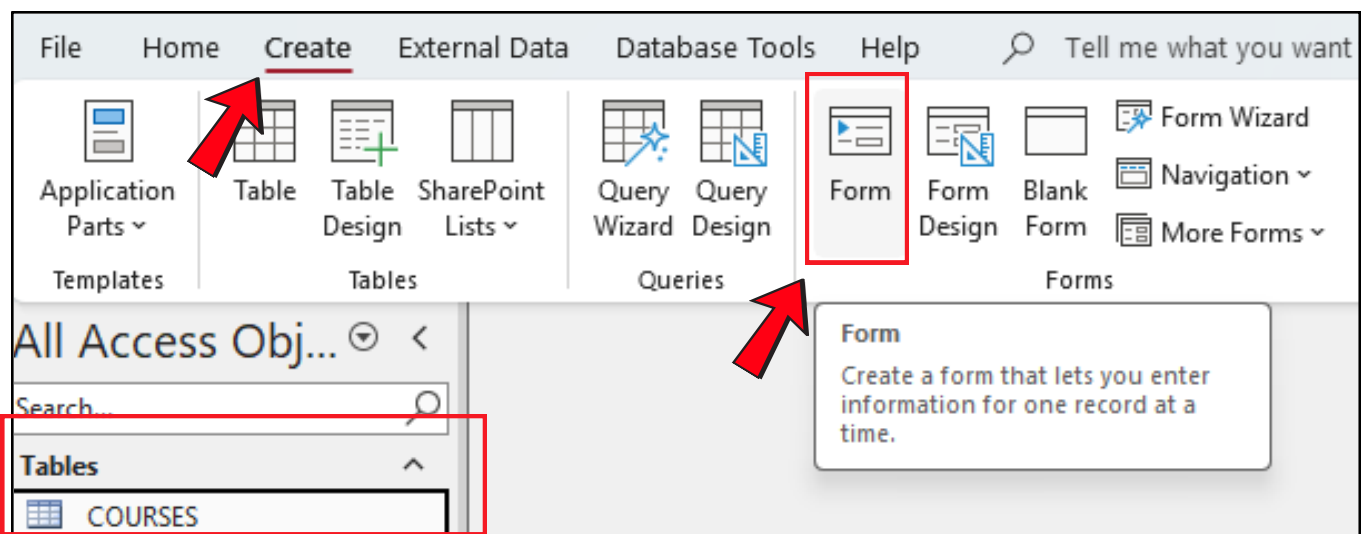
Create a Form for Registering the Courses

This form will allow users to register courses and instructor for each courses.

Method 3: Using the Form Command



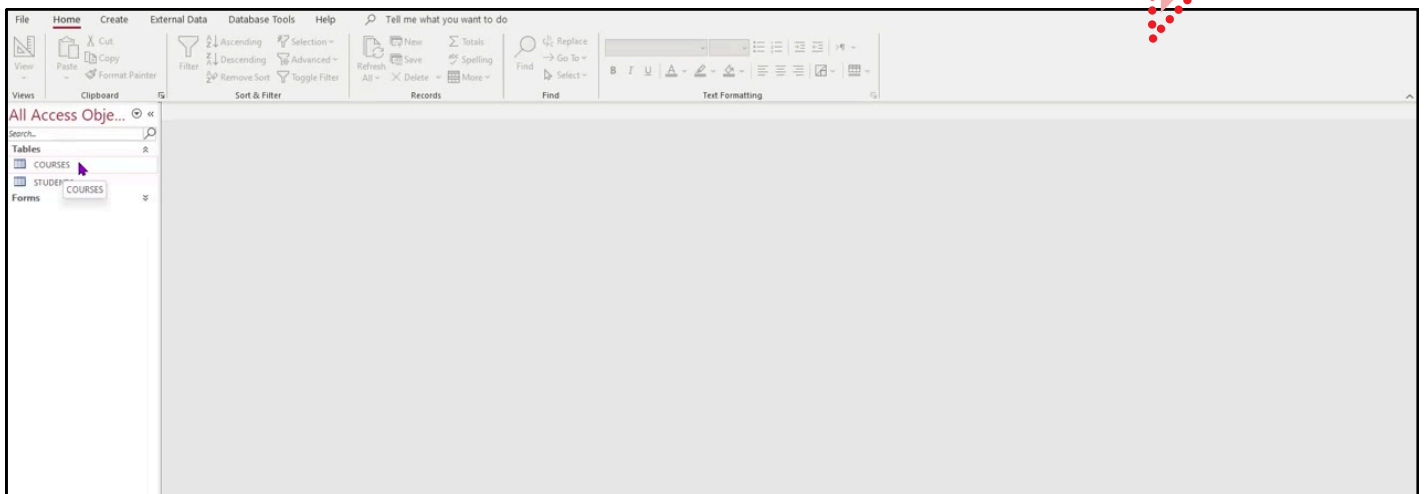
1. Select the **Courses Table**
2. Click on the **Create** tab in the ribbon and click **Form** command.



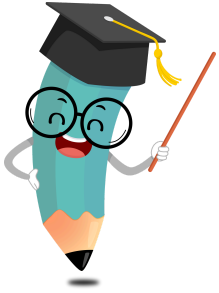
3. Now, your **COURSES FORM** is created and opened in **Layout View**. Save the form as **COURSES FORM**.



A screenshot of a Microsoft Access form titled "COURSES". The form is in Layout View and contains four text boxes for data entry. The first text box is labeled "CourseID" and is highlighted with a thick orange border. Below it are three more text boxes labeled "CourseName", "CourseCode", and "Instructor". The form is enclosed in a dashed border, indicating it is in design mode.



5.3 Modifying Your Form



- Once a form is created in Microsoft Access, you may want to customize it to improve its functionality and appearance. Modifying forms not only enhances the user experience but also ensures your database system looks professional and is easy to navigate.
- This chapter will guide you through the step-by-step process of modifying a form, including adjusting layouts, adding buttons and images, and applying consistent formatting.



STEP 1

Open the Form in Design or Layout View

1. Go to the **Navigation Pane** and **right-click** on the form you wish to modify.
2. You can use **Design View** if you want full control over your form, or try **Layout View** for quick and easy formatting
3. In this practical, we will begin by opening the **Student Form** in Layout View.

STUDENT FORM	
Student_ID	<input type="text"/>
Name	<input type="text"/>
DOB	<input type="text"/>
Gender	<input type="text"/>
Address	<input type="text"/>
Contact_Number	<input type="text"/>
Email	<input type="text"/>





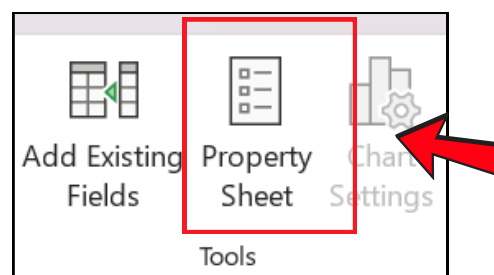
STEP 2

Rearrange or Resize Fields

1. Click on any field (e.g., Name or Contact Number) to select it.
2. Drag the field to a new position or use the resize handles to adjust its size.
3. Use **Ctrl + Click** to select multiple fields for group movement.



- Using the Property Sheet to Resize Fields
- The Property Sheet in Microsoft Access allows you to fine-tune form controls, including the size of text boxes and other fields
- If the Property Sheet is not already visible:
- Go to the Design tab and click on Property Sheet in the Tools group.



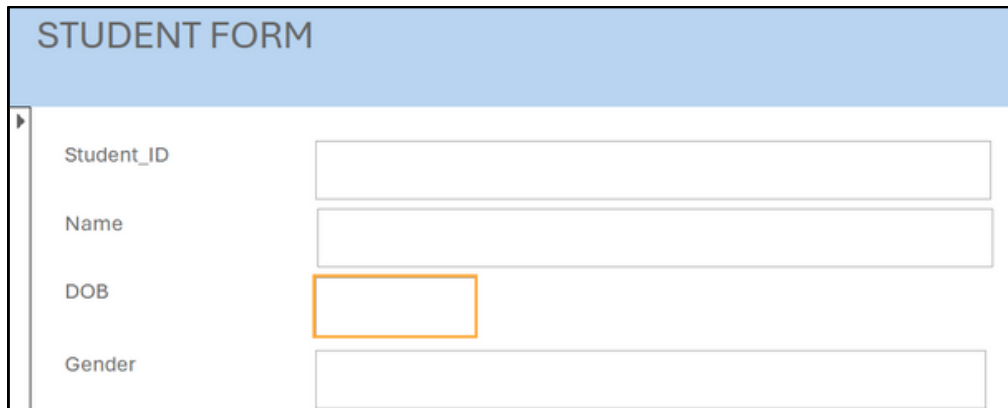
- Click on the text box or control you wish to resize (e.g., the **DOB** field).
- The Property Sheet will update to show the properties of the selected control.

The screenshot shows a 'Property Sheet' window for a 'Text Box' control. The control is labeled 'DOB'. The sheet is organized into tabs: 'Format', 'Data', 'Event', 'Other', and 'All'. The 'Format' tab is active, displaying a list of properties and their values.

Property	Value
Format	Auto
Decimal Places	Auto
Visible	Yes
Show Date Picker	For dates
Width	2.822cm
Height	0.547cm
Top	3.016cm
Left	5.065cm
Back Style	Normal
Back Color	Background 1
Border Style	Solid
Border Width	Hairline
Border Color	Background 1, Darker 35%
Special Effect	Flat
Scroll Bars	None
Font Name	Aptos (Detail)
Font Size	11
Text Align	General
Font Weight	Normal
Font Underline	No



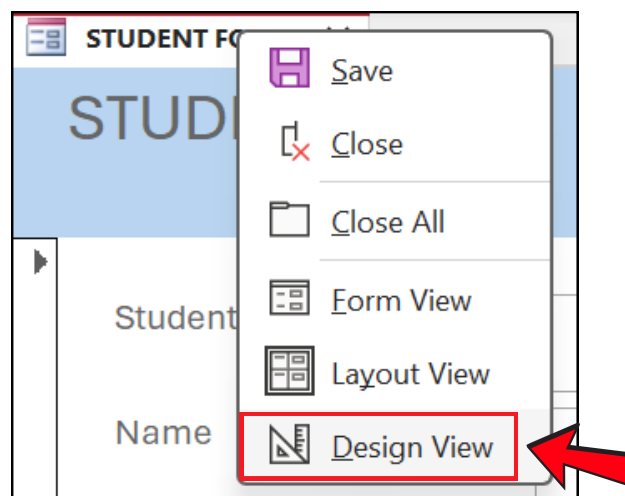
- In the Property Sheet, go to the Format tab to adjust the size of the DOB text box
- Locate the Width and Height properties.
- Enter specific values (e.g., 5cm or 2"), or use the arrow buttons to increase/decrease the size incrementally.
- Example :-



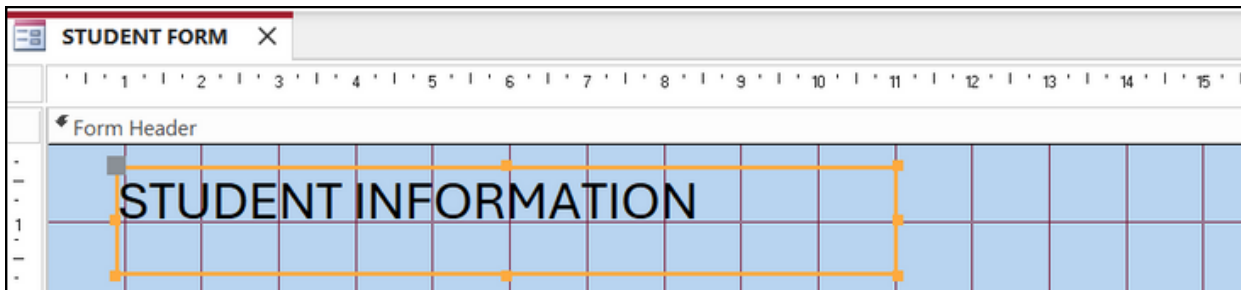
The image shows a form titled "STUDENT FORM" with a light blue header. Below the header, there are four input fields: "Student_ID", "Name", "DOB", and "Gender". The "DOB" field is highlighted with a thick orange border, indicating it is the focus of the current step.

**STEP 3****Edit Title or Heading**

- Right-click on the **form tab** and select **Design View**.

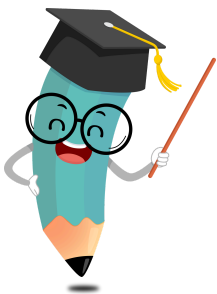


- A default title (e.g., "Student Form") will appear at the form header.
- Click on it to edit the text (e.g., change it to "Student Information").



STEP 4

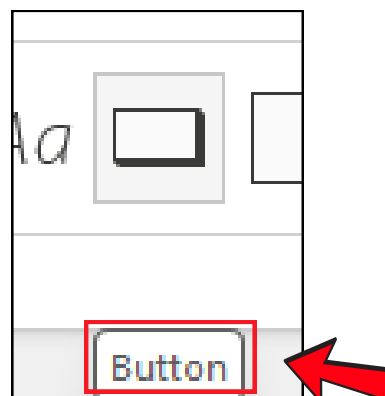
Add Buttons for Navigation or Actions



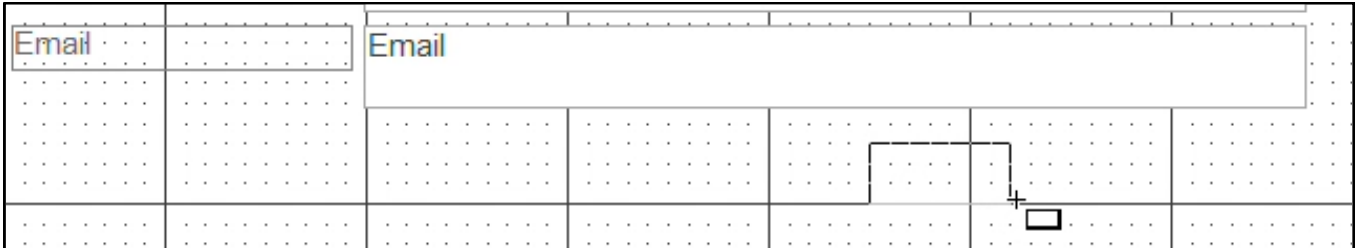
- Access forms come with default navigation buttons, but adding your own makes the form easier to use—especially for beginners. Custom buttons guide users clearly, simplify the interface, and give your form a cleaner, more polished, app-like feel.
- Now, we will add command buttons to the Student form to make it easier to navigate and perform common tasks

 Add a “Next Record” Button

- Click the **Design** tab on the Ribbon.
- In the **Controls** group, click the **Button** tool.

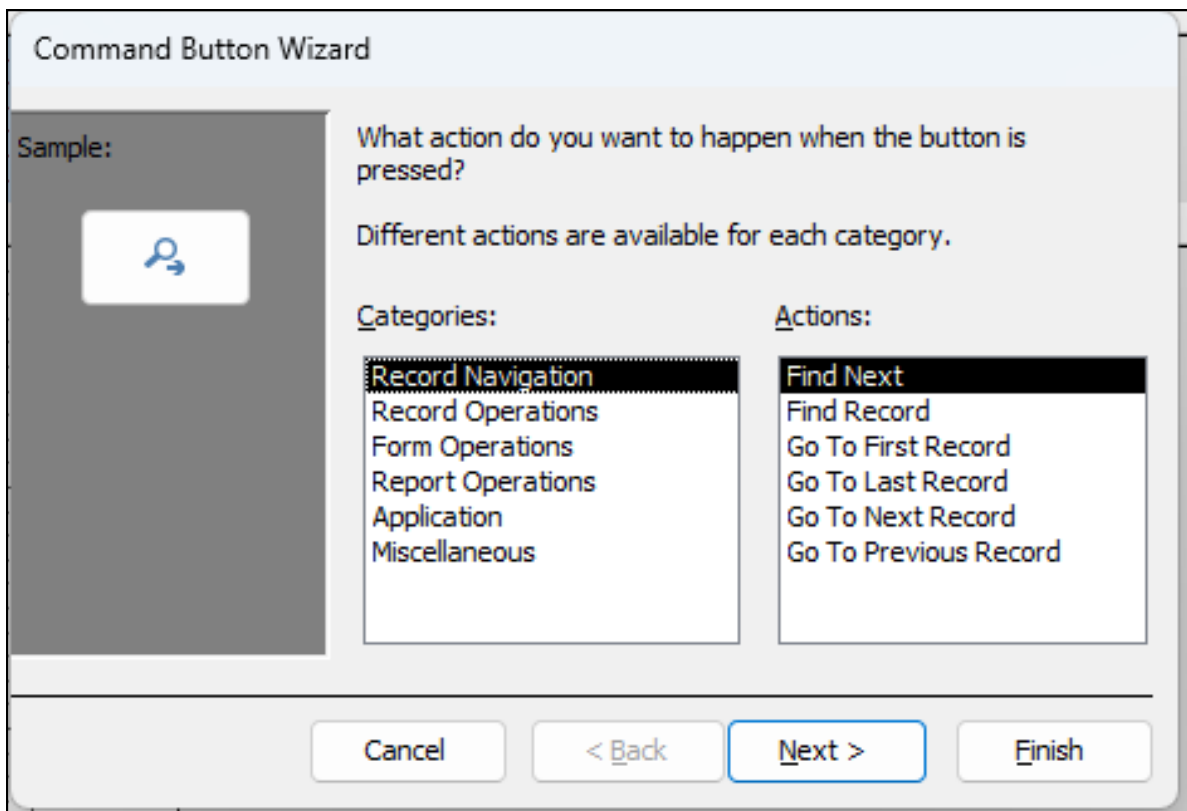


- Click on the form where you want the button to appear.



The image shows a grid-based form design interface. A text box labeled "Email" is positioned in the top-left corner. Below it, a larger text box is also labeled "Email". In the bottom-right area of the grid, a small rectangular button is being placed, with a cursor and a small square indicating its position.

- The **Command Button Wizard** will open.



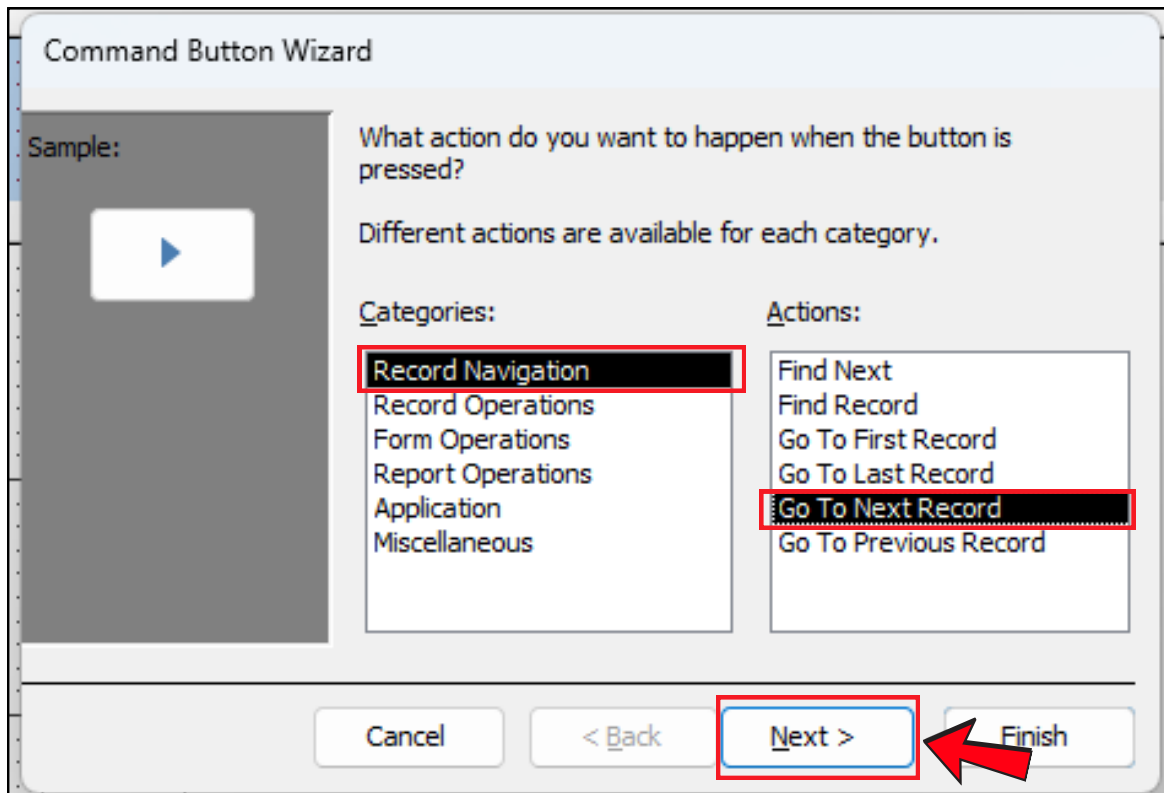
The image shows the "Command Button Wizard" dialog box. The title bar reads "Command Button Wizard". On the left, there is a "Sample:" area showing a magnifying glass icon. The main area contains the text: "What action do you want to happen when the button is pressed?" and "Different actions are available for each category." Below this, there are two lists: "Categories:" and "Actions:". The "Categories:" list includes "Record Navigation", "Record Operations", "Form Operations", "Report Operations", "Application", and "Miscellaneous". The "Actions:" list includes "Find Next", "Find Record", "Go To First Record", "Go To Last Record", "Go To Next Record", and "Go To Previous Record". At the bottom, there are four buttons: "Cancel", "< Back", "Next >", and "Finish". The "Next >" button is highlighted with a blue border.



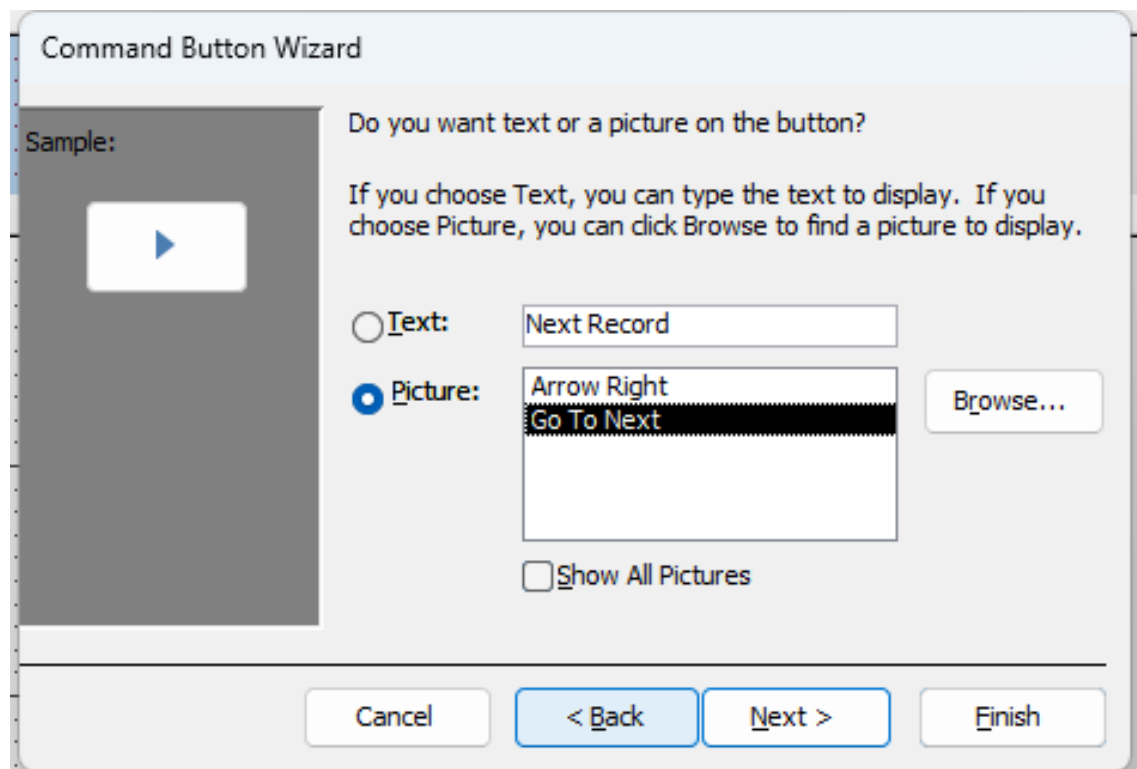
➤ Select:

- **Category:** Record Navigation
- **Action:** Go to next record

➤ Click **Next**.



➤ You can choose to display either text or a picture on the button. In this practical, we'll use the default picture, but you can also browse and select your own image if you have one.



- Click **Finish**.

The image shows a grid-based form design interface. At the top, there is a large text box labeled 'Email'. Below it, the grid contains several empty rectangular fields. In the bottom-right area of the grid, a blue square button with a white play icon is placed. The button has orange handles around it, indicating it is selected or being positioned.



You can further customize the button's font, size, and color using the Format tab after placing it on the form.

➤ Add a “Previous Record” Button

- Repeat steps above but, but choose:
 - **Action:** Go to previous record
 - **Picture :** Go to previous

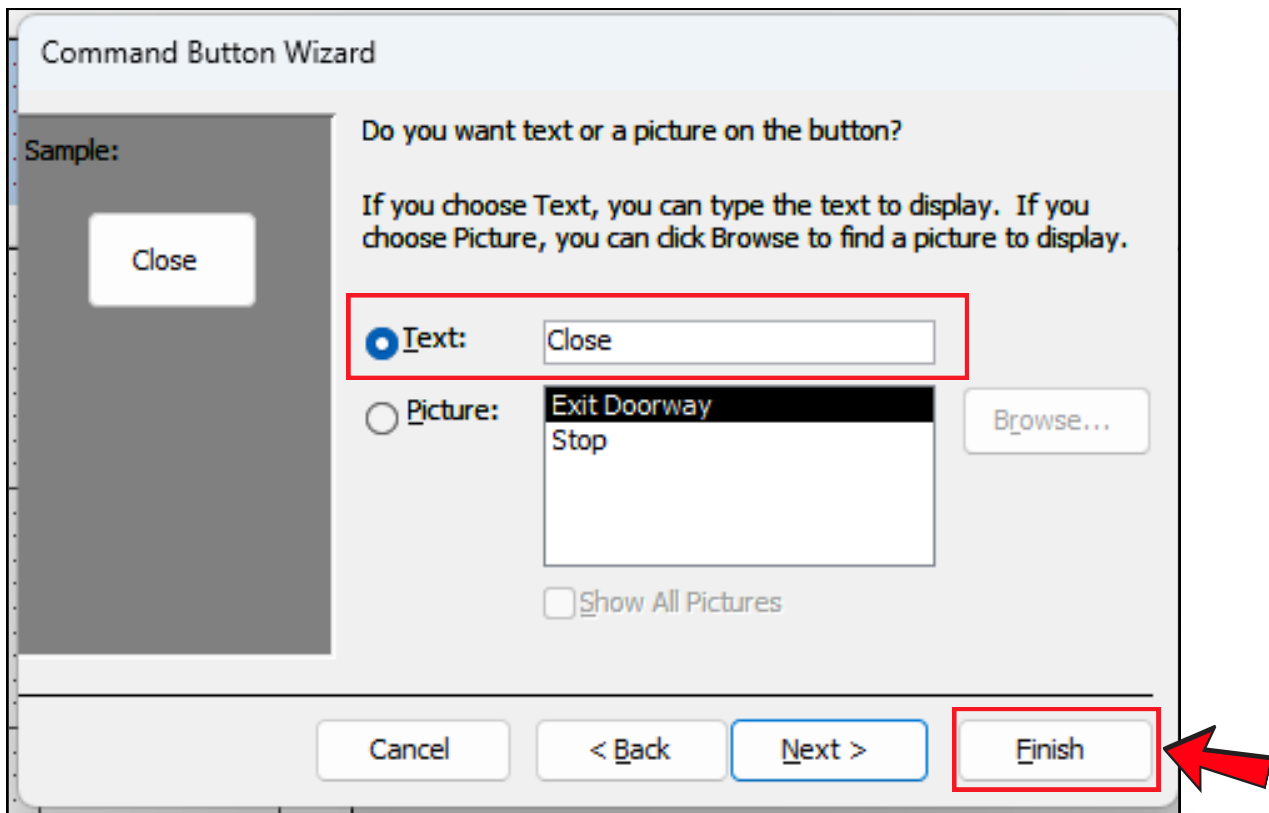
➤ Add a “Close Form” Button

- With the form still in Design View, click the **Button** tool again.
- Place a new button below your navigation buttons.
- In the wizard:
 - **Category:** Form Operations
 - **Action:** Close Form

The image shows the 'Command Button Wizard' dialog box. It has a 'Sample:' area on the left showing a button with a left-pointing arrow. The main area contains the question 'What action do you want to happen when the button is pressed?' and the instruction 'Different actions are available for each category.' Below this are two lists: 'Categories:' and 'Actions:'. In the 'Categories:' list, 'Form Operations' is selected and highlighted with a red box. In the 'Actions:' list, 'Close Form' is selected and highlighted with a red box. At the bottom of the dialog, there are buttons for 'Cancel', '< Back', 'Next >', and 'Finish'. The 'Next >' button is highlighted with a red box, and a red arrow points to it from the right.



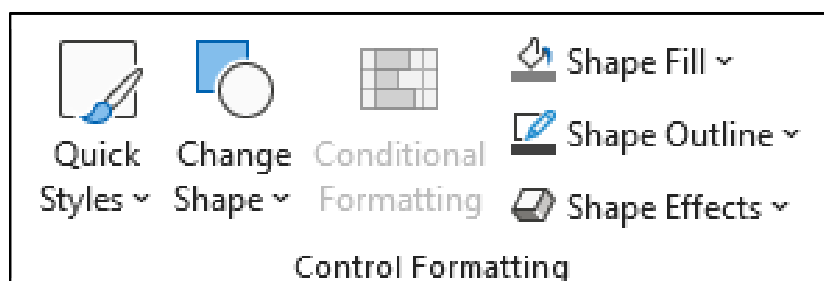
- Set the button to display the text “Close



- Click **Finish**.

🔄 Arrange and Format the Buttons

- Use the mouse to move buttons into a neat row or column.
- Go to the **Format** tab to:
 - Align buttons using the **Align** group
 - Change font, color, or size for better readability



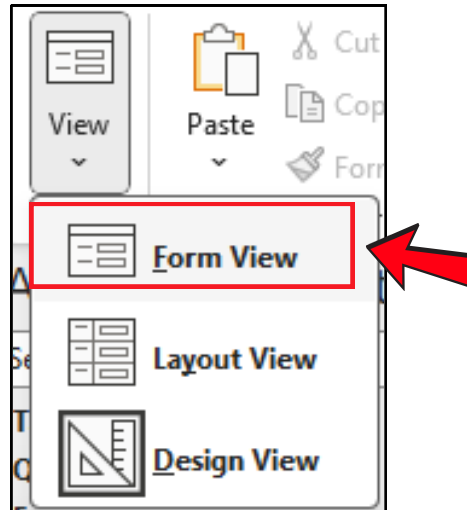


STEP 5

Test Your Buttons



Switch to **Form View** (click **View** > **Form View**).



Click your buttons to check:

STUDENT FORM

STUDENT INFORMATION

Student_ID "Close" close the form

Name

DOB

Gender

Address

Contact_Number "Next" moves to the next student record

Email

"Previous" goes back

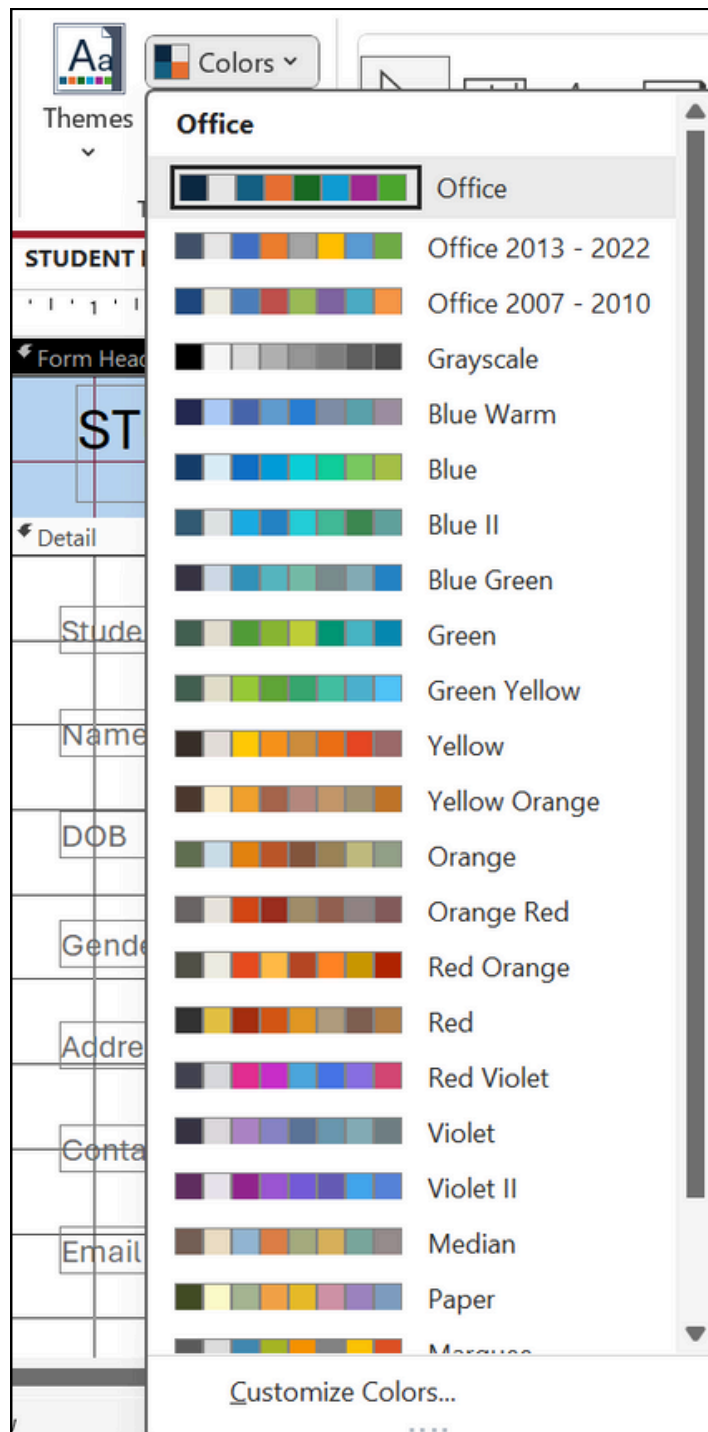




STEP 6

Change Form Colors and Fonts

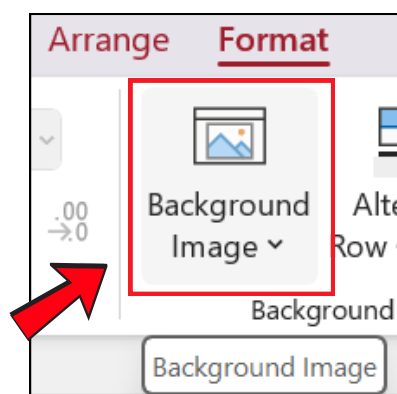
- Now, we will continue editing the form in **Design View**.
- Go to the **Form Design** tab and use options like **Theme Colors** to apply a consistent color palette.



- ➔ Alternatively, you can use the Shape Fill command in the Format tab to apply colors to each section of your form



- You can also add a background image to your form using the Background Image command in the Format tab.



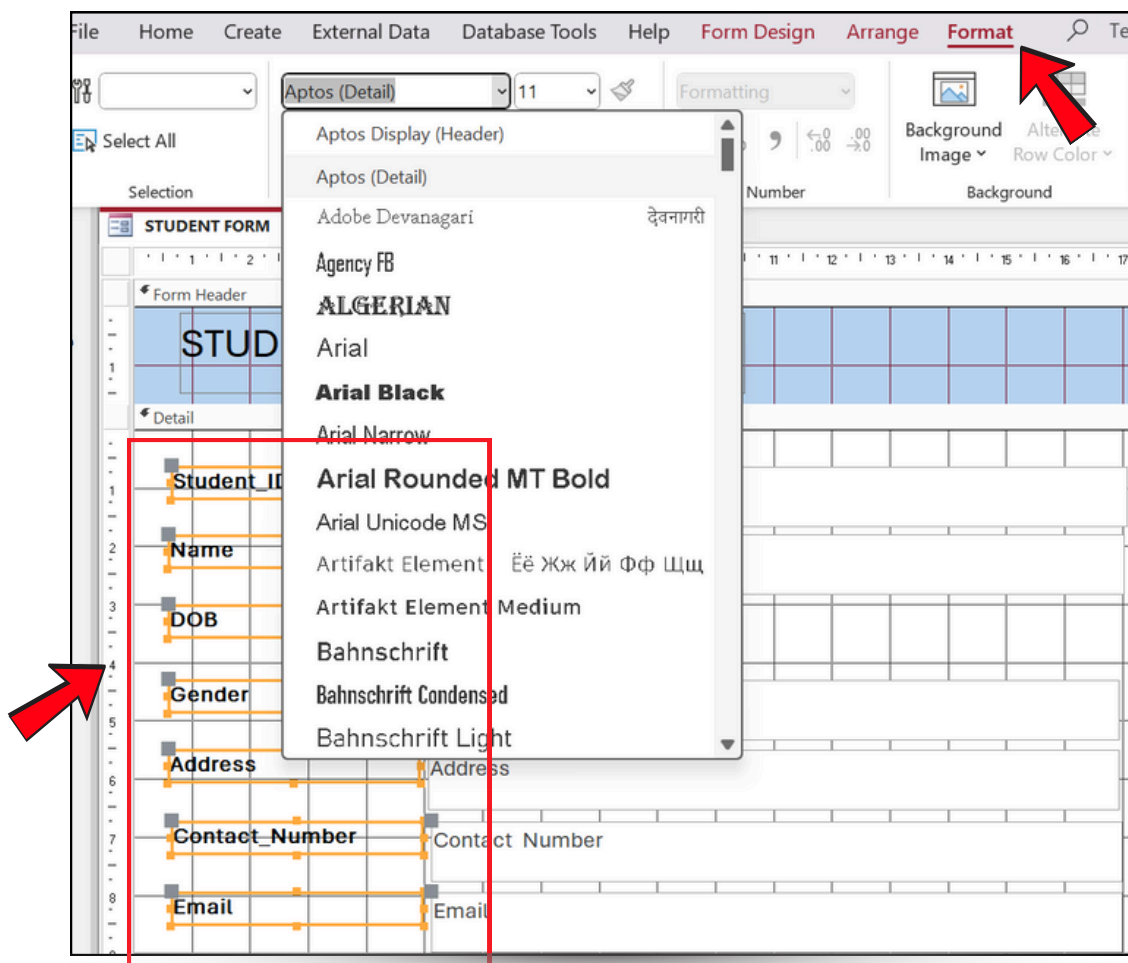


STEP 7

Apply formatting

Format the Field Labels

- **Select all** the field labels in the form. Then, use the Format tab to adjust the font style, size and colours.



Edit the Label Text

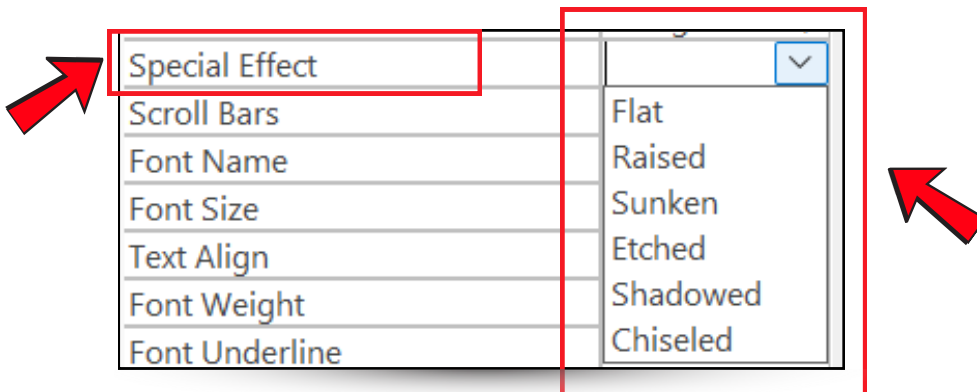
- Double-click each label to edit its text as follows:
 - Change Student_ID → Student ID
 - Change DOB → Date of Birth
 - Change Contact_Number → Contact Number



Adjust Text Alignment

- Select all the text boxes in the form, and on the **Format tab**, set their text alignment to Left.
- Switch to Form View to see the effect – all the data in the text boxes will now be aligned to the left.

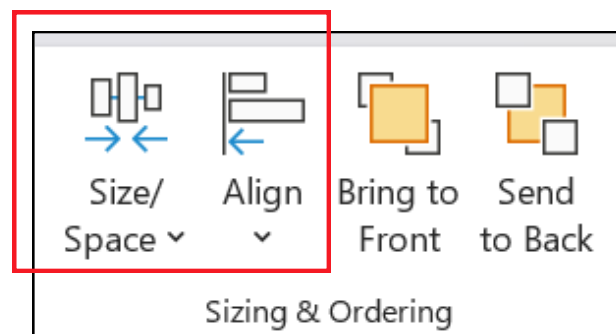
To **add effects** to your text boxes, select all the text boxes in the form. On the Format tab of the Property Sheet, choose the Special Effect command, and select any effect you like.



STEP 8

Use Layout Tools for Alignment

- Select multiple text boxes or labels.
- Go to the **Arrange** tab.
- Use **Align** or **Size/Space** options to make your layout more balanced and visually neat.



**Practice**

Modify all your forms to make them more attractive.



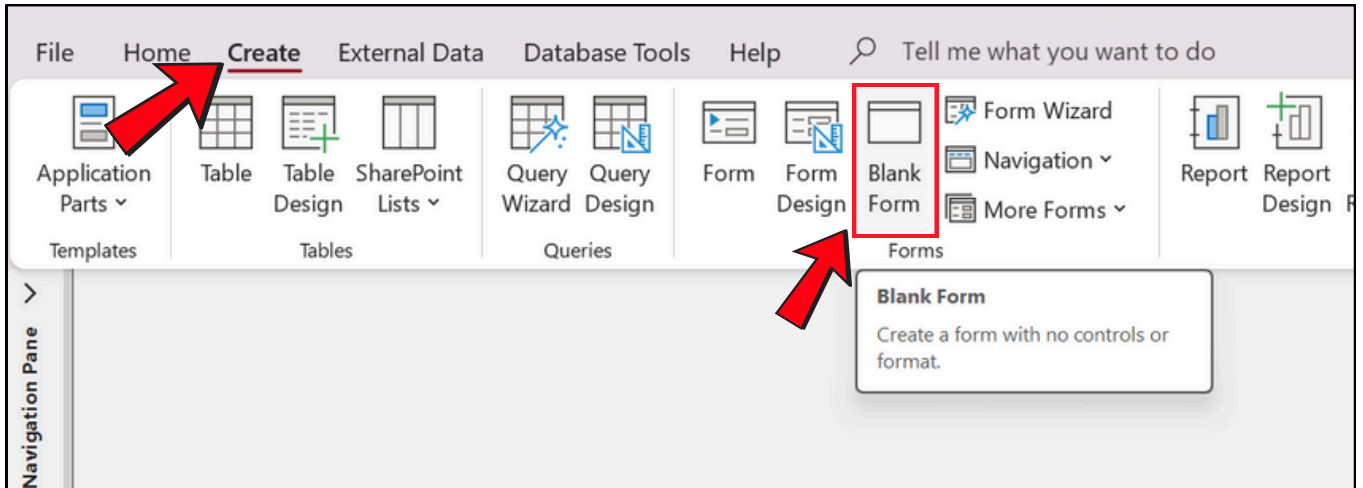
5.4 Create a Main Menu Form



A **Main Menu Form** serves as the central navigation hub for your Microsoft Access database. It provides users with a simple, user-friendly interface to access different parts of the system—such as student records, reports, queries, and data entry forms—without having to browse through the navigation pane.

Next, we'll create a Main Menu Form to provide easy access to all other forms in the database.

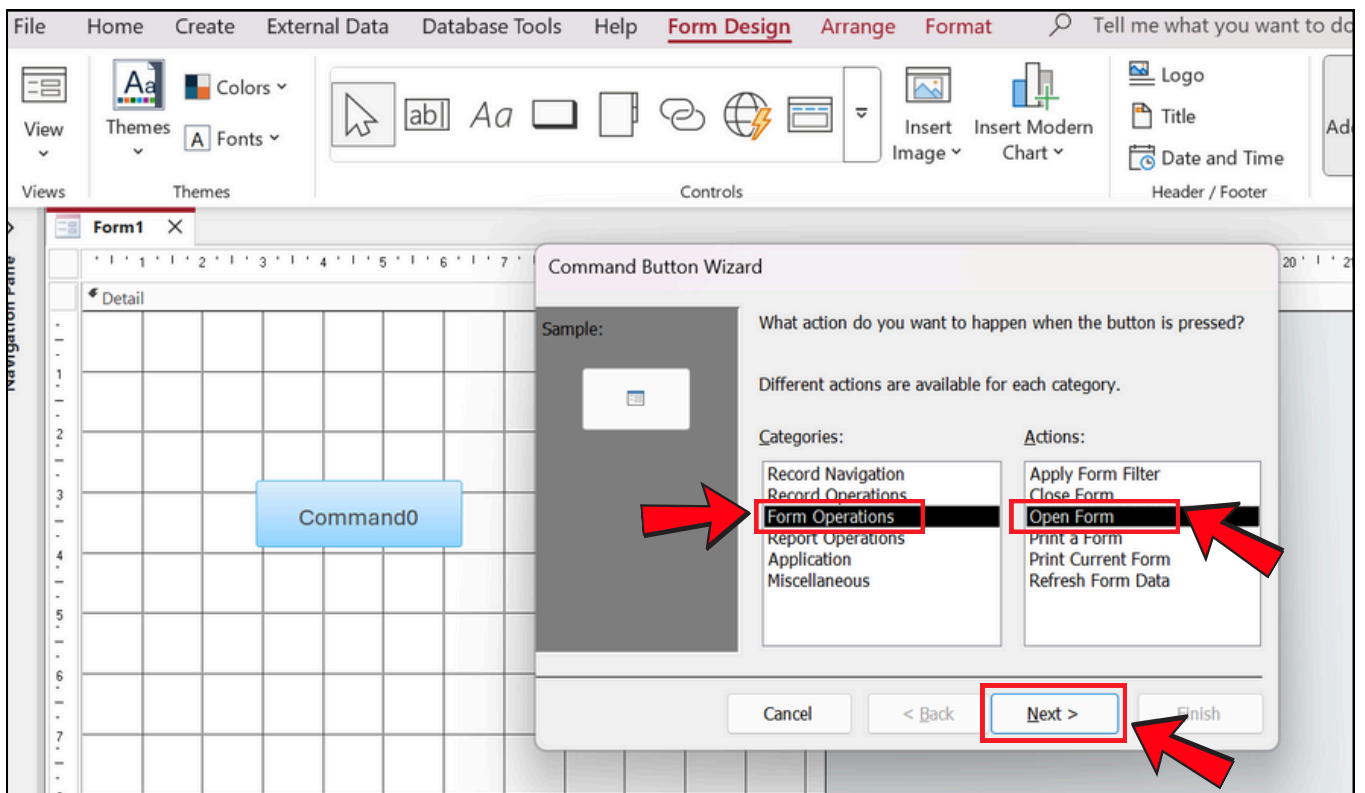
1. Go to **Create > Blank Form**.



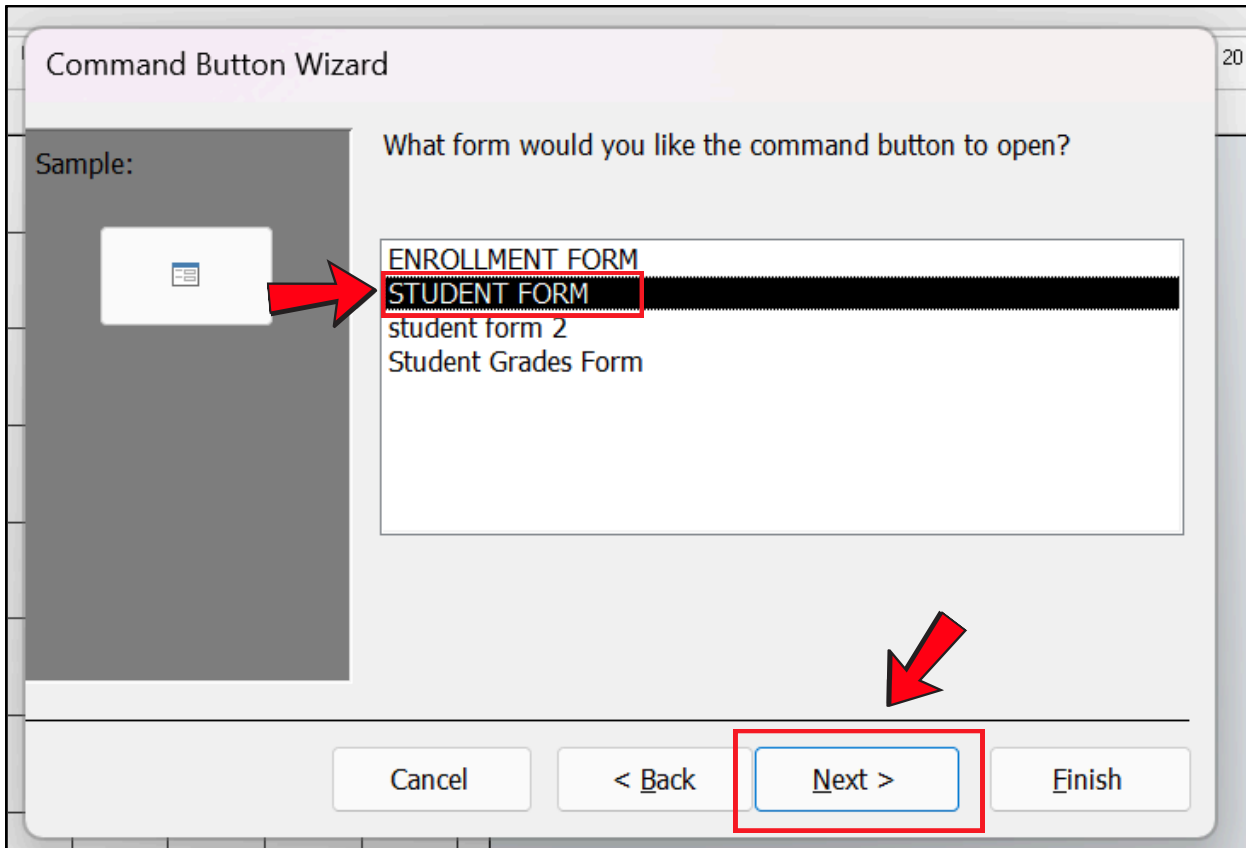
2. Add Buttons from the Controls tab for Students, Enrollment, and Grades Forms.



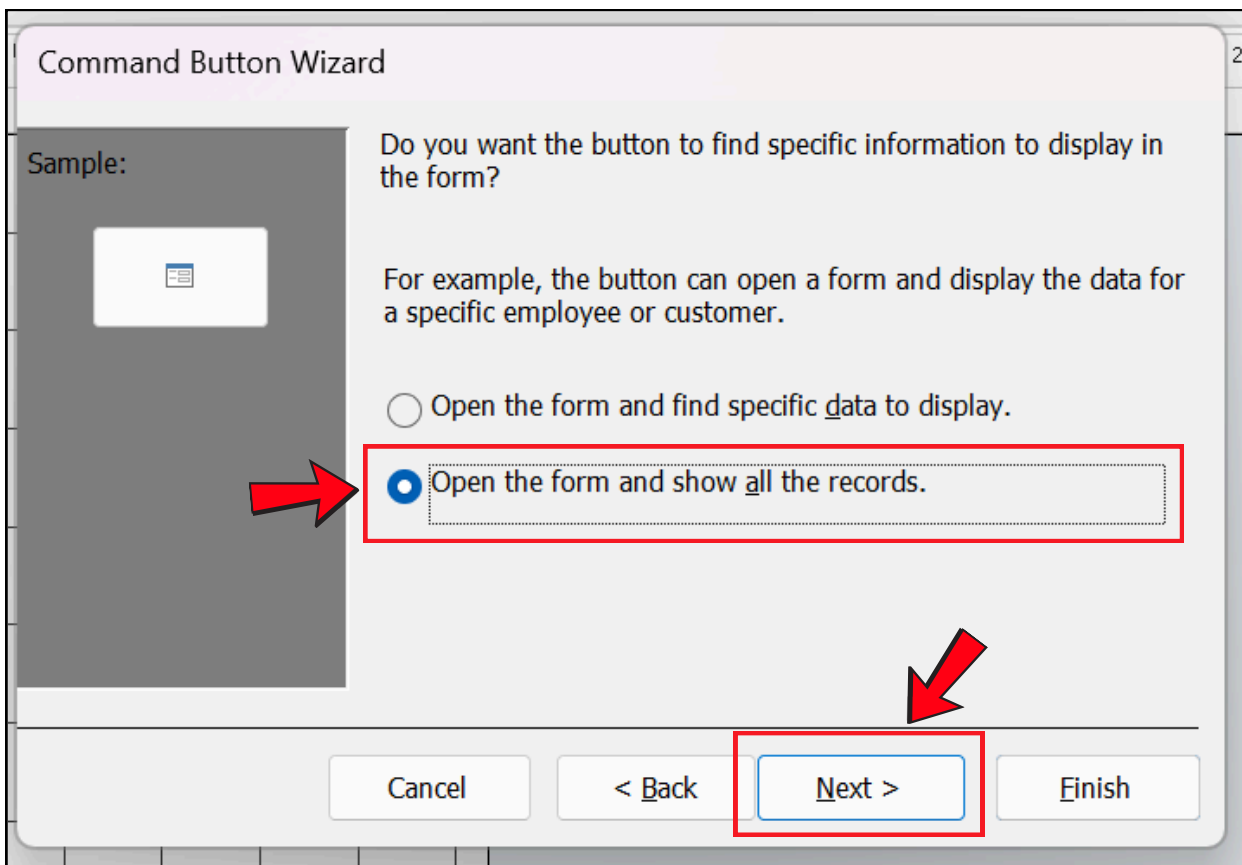
First, we will set the button to open the students form. Choose **Open Form** action from **Form Operations** category.



3. Set each button's **On Click** event to **Open Form** and select the respective form.



4. Choose “**Open the form and show all the records**”.



5. Then, you can choose either text or picture on the button. **In this practical, we will choose text on the button.**

Command Button Wizard

Sample:

Do you want text or a picture on the button?

If you choose Text, you can type the text to display. If you choose Picture, you can click Browse to find a picture to display.

Text:

Picture:

Show All Pictures

6. Then, you can **save the name for the button** and click **Finish**.

Command Button Wizard

Sample:

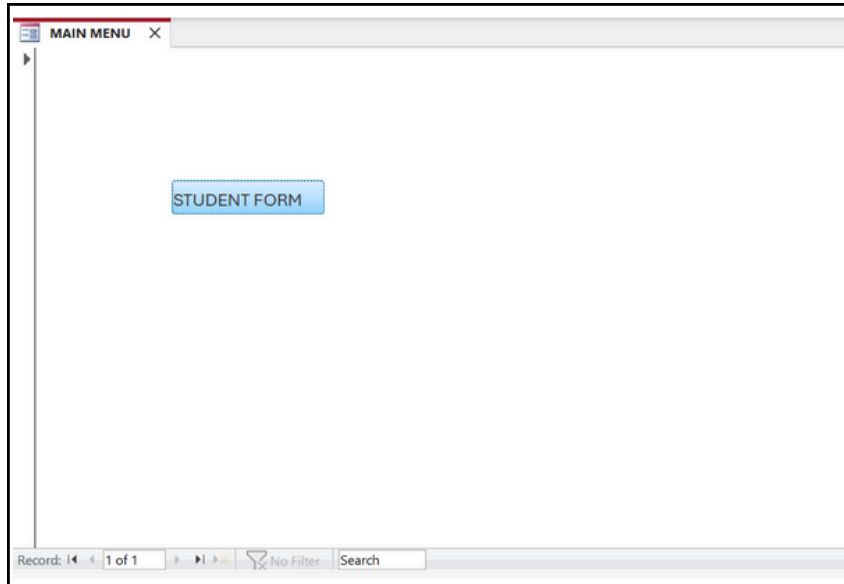
What do you want to name the button?

A meaningful name will help you to refer to the button later.

That's all the information the wizard needs to create your command button. Note: This wizard creates embedded macros that cannot run or be edited in Access 2003 and earlier versions.



7. To **test** the button, right-click the form's tab and select **Form View** to open the form, then click the button to see if it works.

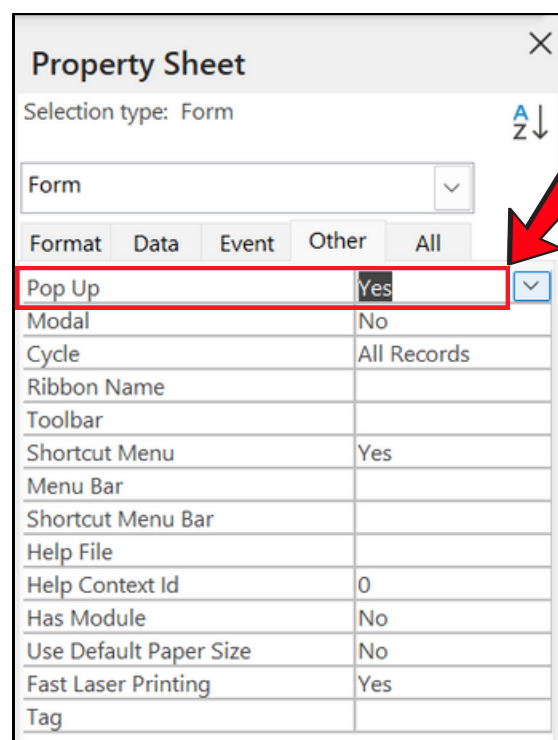


8. **Repeat** the steps to **add buttons for Enrollment, and Grades Forms.**

9. Save the form as **Main Menu.**

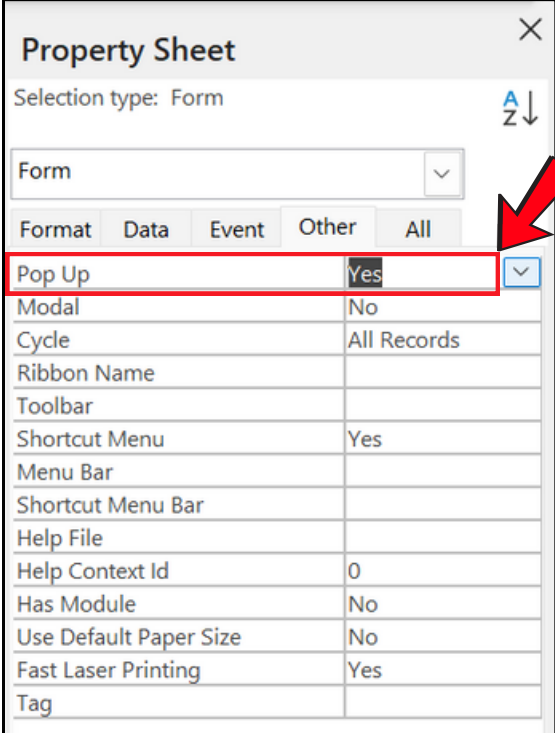
🌀 Now your database has forms for **adding students, enrolling them in courses, and recording grades!**

🌀 To **set pop up** for your **Main Menu form**, go to the **property sheet** and **change pop up** to 'yes'.



Now your database has forms for **adding students, enrolling them in courses, and recording grades!**

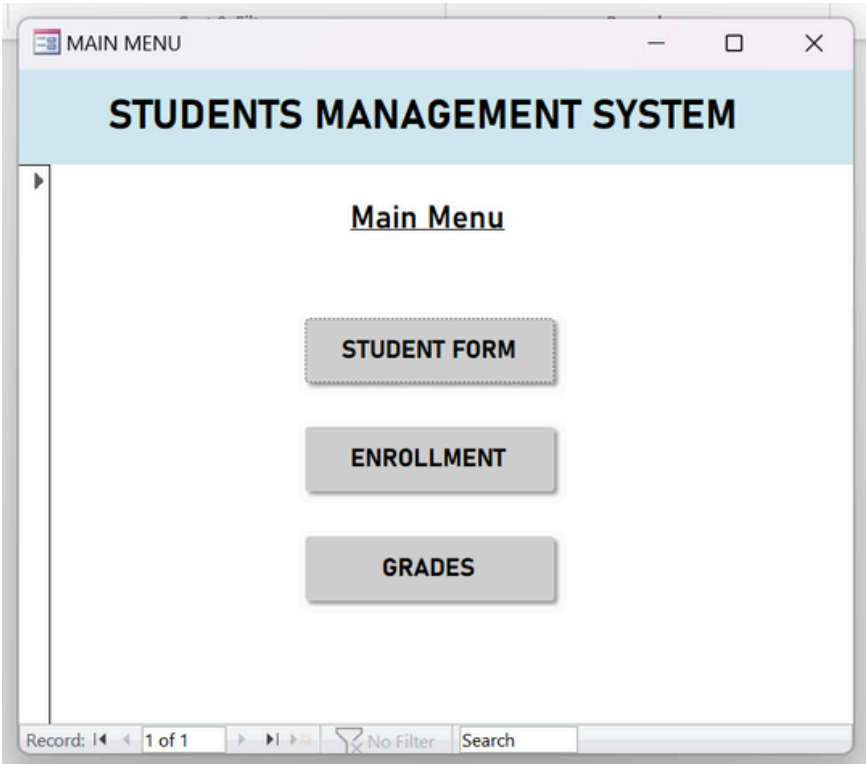
To **set pop up** for your Main Menu form, go to the **property sheet** and **change pop up** to 'yes'.



The screenshot shows the 'Property Sheet' window for a 'Form'. The 'Pop Up' property is highlighted with a red box and a red arrow pointing to its dropdown menu, which is set to 'Yes'. Other properties include Modal (No), Cycle (All Records), Ribbon Name, Toolbar, Shortcut Menu (Yes), Menu Bar, Shortcut Menu Bar, Help File, Help Context Id (0), Has Module (No), Use Default Paper Size (No), Fast Laser Printing (Yes), and Tag.


Property	Value
Pop Up	Yes
Modal	No
Cycle	All Records
Ribbon Name	
Toolbar	
Shortcut Menu	Yes
Menu Bar	
Shortcut Menu Bar	
Help File	
Help Context Id	0
Has Module	No
Use Default Paper Size	No
Fast Laser Printing	Yes
Tag	

So, your Main Menu will be pop up every time you open the form



The screenshot shows the 'MAIN MENU' window for the 'STUDENTS MANAGEMENT SYSTEM'. The window title is 'MAIN MENU'. The main content area displays the title 'Main Menu' and three buttons: 'STUDENT FORM', 'ENROLLMENT', and 'GRADES'. The bottom status bar shows 'Record: 1 of 1', 'No Filter', and a search field.





Practice

Modify your Main Menu form to make it more attractive.

EXAMPLE

Example of the **Main Menu form** after modification



Practice 1 : Data Entry

Use the form created to enter all the sample data given for each table (Students, Courses, Enrollment, and Grades)

STUDENTS

Student ID	Name	DOB	Gender	Address	Contact Number	Email
S001	Alia binti Ali	1 Jan 2006	Female	40, Lorong Setia 1, Taman Setia, 21050 Kuantan	012-1234567	aliaali@gmail.com
S002	Bernard Chandran	2 Feb 2006	Male	Lot 608, Kg Bintang, 26500 Maran	014-1122334	bernard@gmail.com
S003	Hud bin Hamzah	4 April 2006	Male	2, Lorong Cempaka 2/2, Taman Cempaka Indah, 26070 Kuantan	017-4455667	hud@gmail.com
S004	Mawar binti Yusof	5 May 2006	Female	No. 1, Kg Sejahtera, 26600 Pekan	011-7788990	mawar@gmail.com



 COURSES

CourseID	Course Name	Course Code	Instructor
C01	Database Fundamentals	SFC10393	Pn. Khairani binti Ibrahim
C02	English	MPU1101	Sir Alex Fernadez
C03	Basic Mathematics	SFC10343	En. Lutfi bin Hafiz
C04	Application Computer	STM10462	Pn. Rahil binti Rafiq

 ENROLLMENT

StudentID	CourseID	Enrollment Date
S001	C01	2 Jan 2025
S002	C01	2 Jan 2025
S003	C03	4 Jan 2025
S004	C03	4 Jan 2025

 GRADES

StudentID	CourseID	Grade
S001	C01	85
S002	C01	70
S003	C03	90
S004	C03	75





CHAPTER

6

> 6.1 What are Queries?

Queries are used in Access to search, filter, and gather specific data from one or more tables. Running a query is similar to asking a question to your database, where you set certain conditions to retrieve only the information you need.

> 6.2 Creating Basic Queries

1. **Select Queries:** Retrieving specific records

Creating a Select Query

EXAMPLE 1

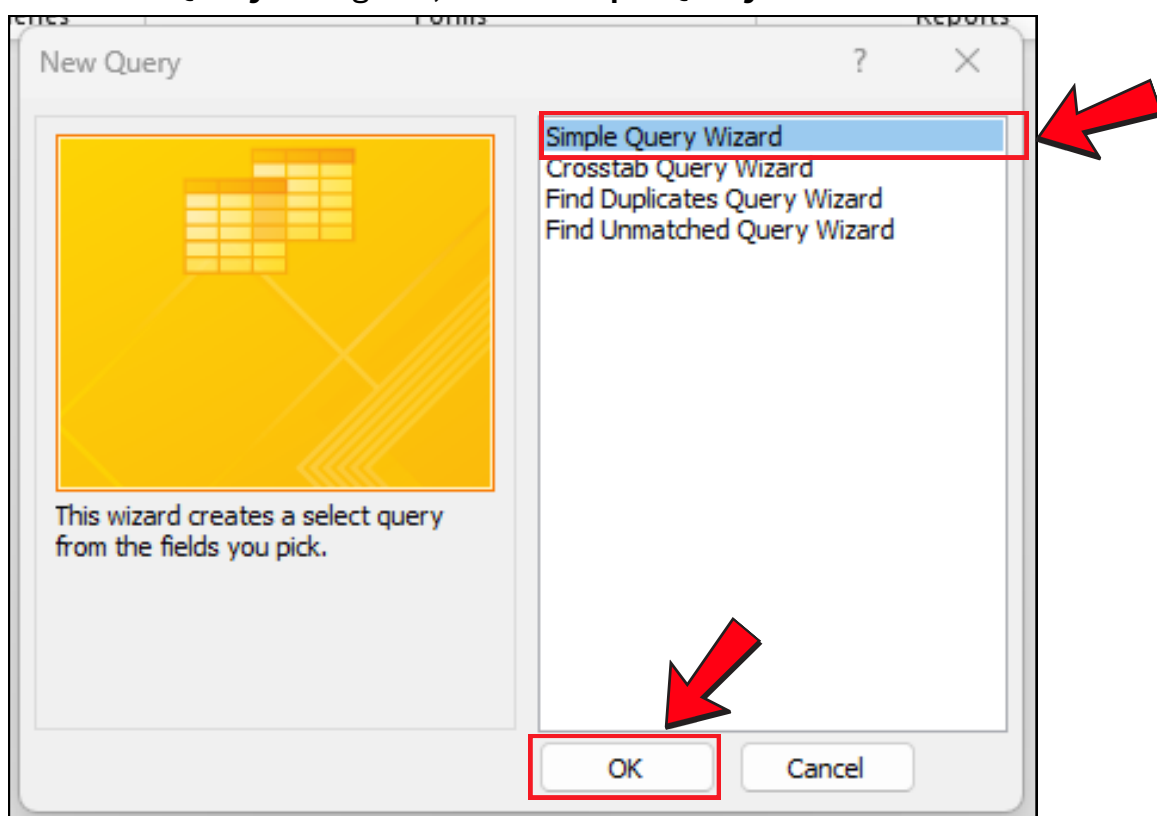
Create a query to list all students

Method 1: Using Query Wizard

1. Go to the **Create tab** → Click **Query wizard**.



2. In the **New Query** dialog box, select **Simple Query Wizard** and Click **OK**



3. Select Table: **STUDENTS** from Tables/Queries dropdown. Then, click **right double arrow (>>)** to insert all available fields to the selected fields box and Click **Next**.

Simple Query Wizard

Which fields do you want in your query?
You can choose from more than one table or query.

Tables/Queries
Table: STUDENTS

Available Fields:

Selected Fields:
Student_ID
Name
DOB
Gender
Address
Contact_Number
Email

Cancel < Back **Next >** Finish

4. **Save** the query → Name it: **qryAllStudents** and Click **Finish**

Simple Query Wizard


What title do you want for your query?
qryAllStudents

That's all the information the wizard needs to create your query.
Do you want to open the query or modify the query's design?

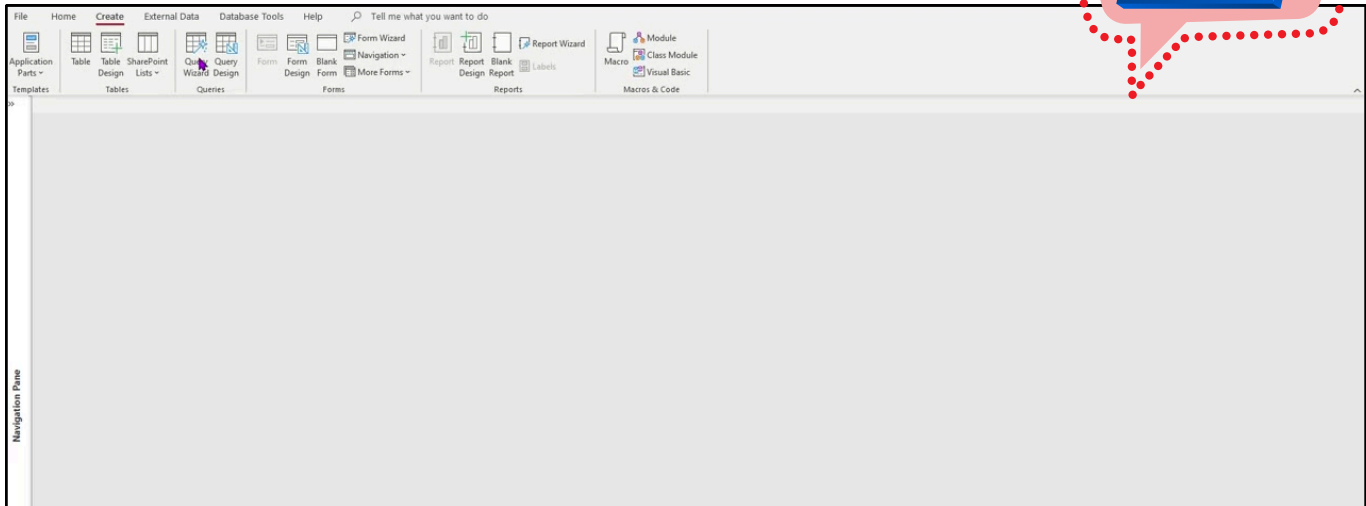
Open the query to view information.
 Modify the query design.

Cancel < Back Next > **Finish**



 Your query will look like this

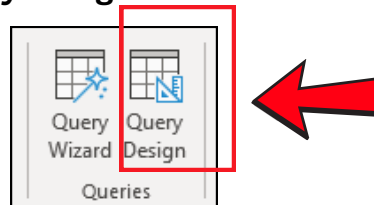
Student_ID	Name	DOB	Gender	Address	Contact_Number	Email
S001	Alia binti Ali	1/1/2006	Female	40, Lorong Setia 1, Taman Setia, 21050 Kuantan	012-1234567	aliaali@gmail.com
S002	Bernard Chan	2/2/2006	Male	Lot 608, Kg Bintang, 26500 Maran	014-1122334	bernard@gmail.com
S003	Hud bin Hamz	4/4/2006	Male	2, Lorong Cempaka 2/2, Taman Cempaka Indah, 26070	017-4455667	hud@gmail.com
S004	Mawar binti Y	5/5/2006	Female	No. 1, Kg Sejahtera, 26600 Bekan	011-7788990	mawar@gmail.com



Method 2: Using Query Design

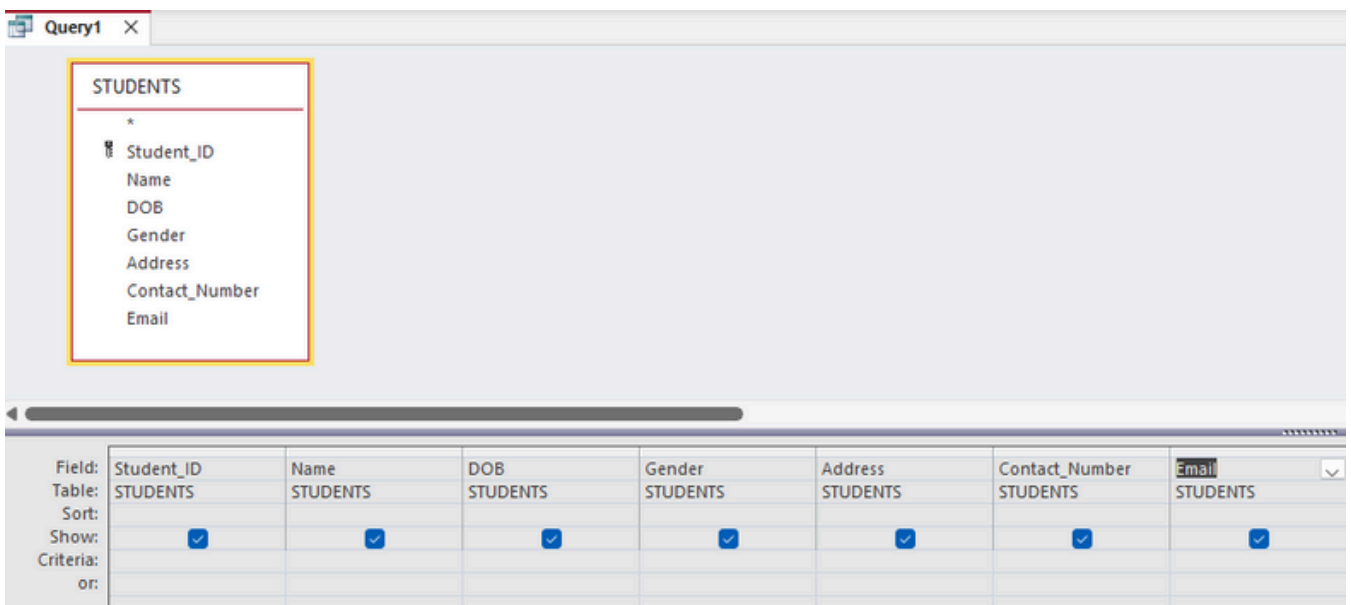


1. Go to the **Create** tab → Click **Query Design**.

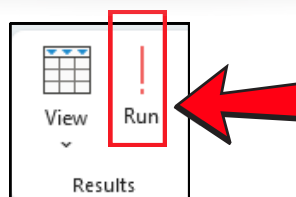


2. In the **Show Table** dialog box, select **Students** table → Click **Add** → Click **Close**.

- **Double-click** the following fields to add them to the grid:
 - StudentID
 - Name
 - DOB
 - Gender
 - Address
 - Contact_Number
 - Email




3. Click **Run** (red exclamation mark).



4. To save your query, click the **Save** button on the Quick Access Toolbar or right click on the query's tab > select **Save**. When prompted, enter a name for your query and then click **OK**. In this practical, save the query as **qryAllStudents**.



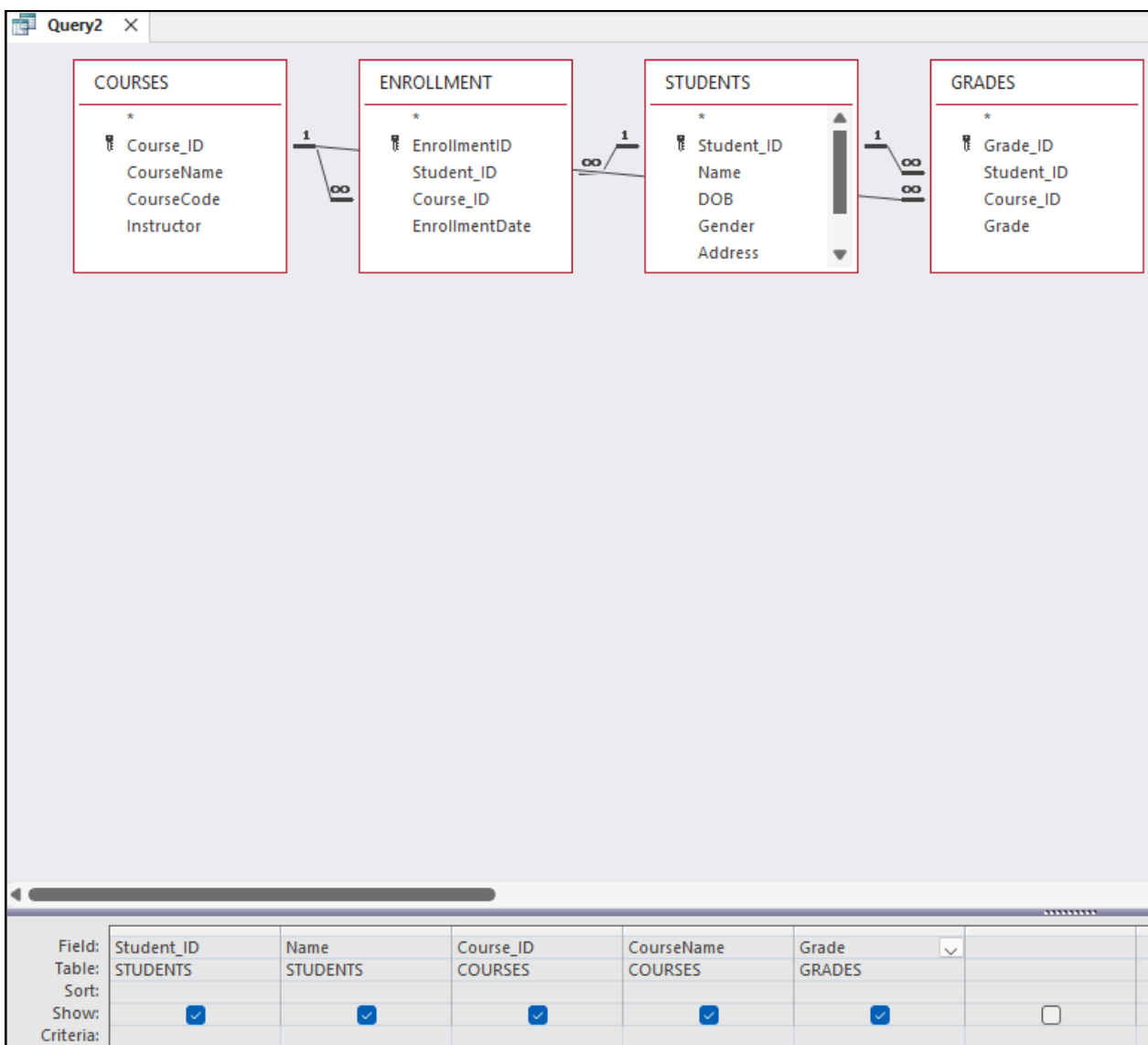
 Click the link to learn about the Query Design view



EXAMPLE 2

Create a query to list students and their grades

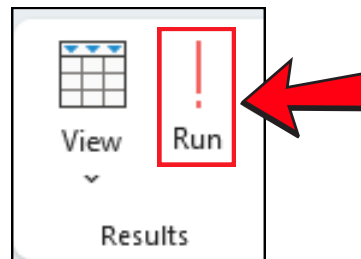
1. Go to the **Create tab** → Click **Query Design**.
2. In the **Show Table dialog box**, add **all tables**



3. **Double click** the field names to add them to the grid:

- **StudentID** and name from **STUDENTS** table
- **CourseID** and **CourseName** from **COURSES** table
- **Grade** from **GRADES** table

4. Click **Run** (red exclamation mark).



5. **Save** the query → Name it: **qryStudentsGrades**

Student_ID	Name	Course_ID	CourseName	Grade
S001	Alia binti Ali	C01	Database Fundamentals	85
S002	Bernard Chandran	C01	Database Fundamentals	70
S003	Hud bin Hamzah	C03	Basic Mathematics	90
S004	Mawar binti Yusof	C03	Basic Mathematics	75





Filter Queries: a mechanism to restrict the data returned by a query, allowing you to focus on specific records or subsets of data that meet certain criteria.

> Creating a Filter Query

EXAMPLE Create a query to list all female students

1. Go to the **Create tab** → Click **Query Design**.
2. In the **Show Table dialog box**, select **Students table** → Click **Add** → Click **Close**.

Field:	Student_ID	Name	Gender	Contact_Number
Table:	STUDENTS	STUDENTS	STUDENTS	STUDENTS
Sort:				
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:			"female"	
or:				

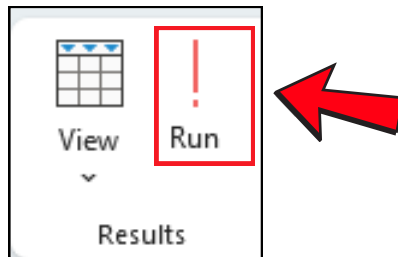


3. Double click the field names to add them to the grid:

- **StudentID**
- **Name**
- **Gender**
- **Contact_Number**

4. Type **'female'** on criteria for **Gender** to filter female students. Typing the criteria row will set your query to include only results that meet all the criteria.

5. Click **Run** (red exclamation mark).



6. **Save** the query → Name it: **qryFemaleStudents**

Student_ID	Name	Gender	Contact_Number
S001	Alia binti Ali	Female	012-1234567
S004	Mawar binti Yusof	Female	011-7788990
*			





- There may be situations where a field contains important criteria for your query, but you don't necessarily need to display that field in the final query results.
- For example, we want to create a query to list all female students **without showing** the **Gender field**.

🔄 To hide a field within a query:

- In query design view, Click the **checkbox** in the **Show** row for **Gender field** to **uncheck** it.

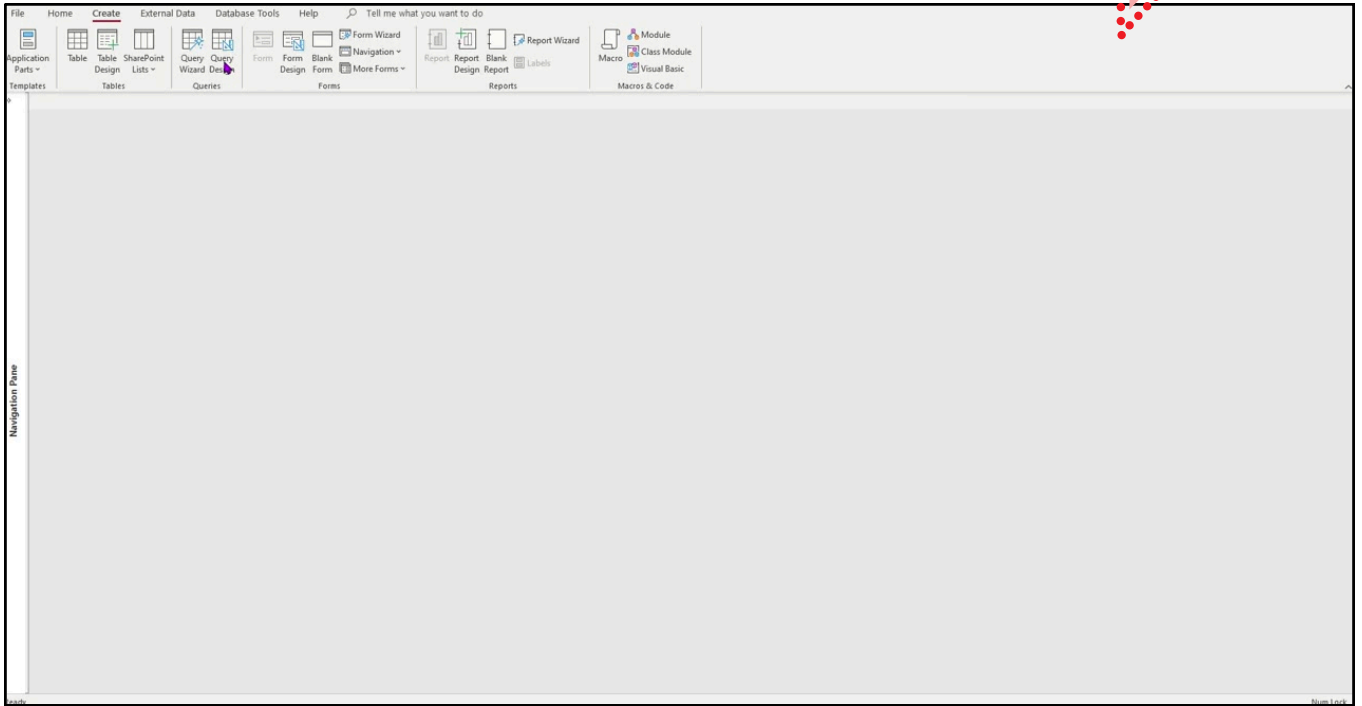
Field:	Student_ID	Name	Gender	Contact_Number
Table:	STUDENTS	STUDENTS	STUDENTS	STUDENTS
Sort:				
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:			"female"	
or:				

- Access has hidden the Gender field while still applying the other criteria we selected.

Student_ID	Name	Contact_Number
S001	Alia binti Ali	012-1234567
S004	Mawar binti Yusof	011-7788990
*		

- To display a hidden field again, go back to Design View and check the box in the field's "Show" row.





> 6.3 Advanced Queries

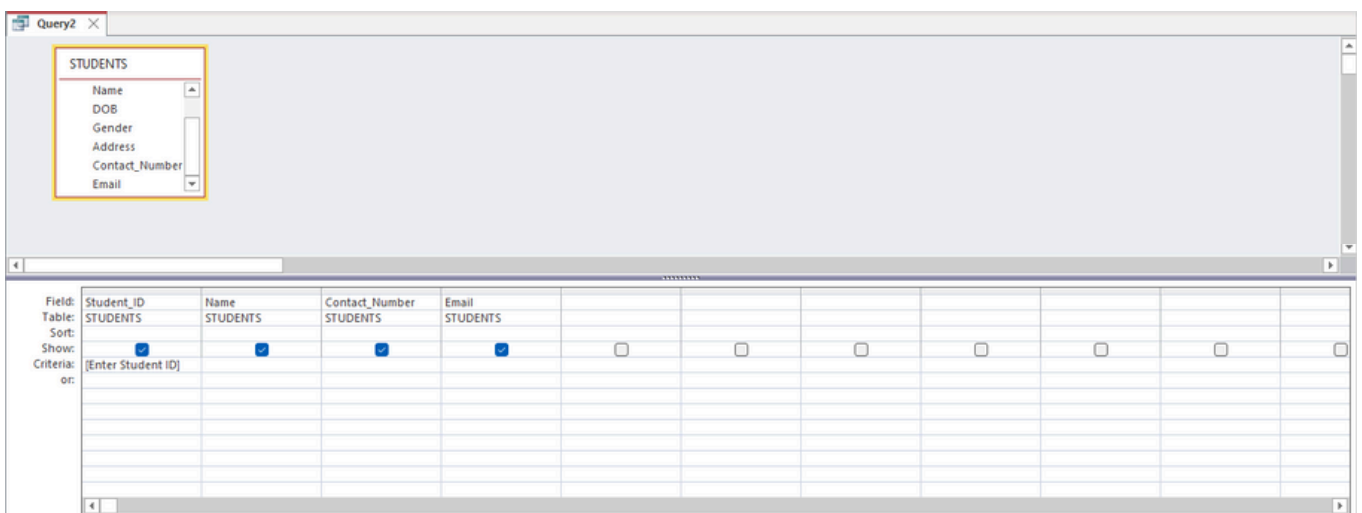


Parameter Queries: Allows you to create a query that prompts the user for specific criteria when it's run, rather than having those criteria hardcoded within the query itself. This enables you to reuse the same query structure for different inputs without needing to modify the query's design.

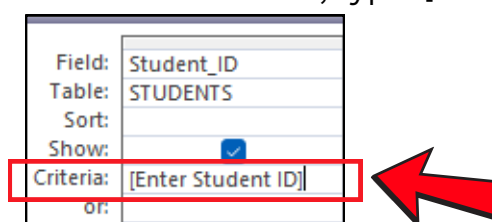
> Creating a Parameter Query

EXAMPLE Create a query to search Student by StudentID

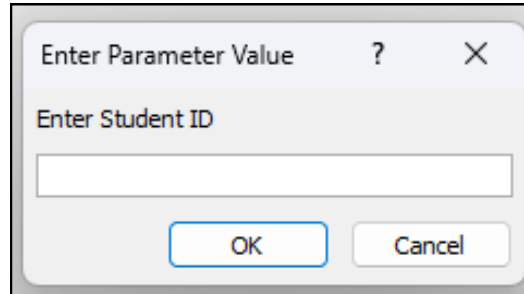
1. Go to the **Create** tab → Click **Query Design**.
2. Add Students table.
3. Double click the field names to add them to the grid:
 - **StudentID**
 - **Name**
 - **Contact_Number**
 - **Email**
4. In the **Criteria** row of the field that you want to apply a parameter to, enter the text that you want to display in the parameter box, enclosed in square brackets.



For example, In the Criteria row under StudentID , type: [Enter Student ID]



5. Run the query → Enter a Student ID when prompted.



6. Save as: qrySearchStudentByID



 Scan the marker to do exercise



**QUERY
(EXERCISE)**



Practice 2

1. Create a select query to list all male students .
(show Name, StudentID , Gender and Contact Number)
2. Create a parameter query to search the students grade by Course Code.
(show Name, StudentID, Course Name and Grade)

• Answer

Your query should look like this:

1. Query to list all male students:

Name	Student_ID	Gender	Contact_Number
Bernard Chandran	S002	Male	014-1122334
Hud bin Hamzah	S003	Male	017-4455667
*			

2. Parameter query to search the students grade by Course ID.

Enter Parameter Value ? X

Enter Course Code

OK Cancel

Name	Student_ID	CourseName	Grade
Alia binti Ali	S001	Database Fundamentals	85
Bernard Chandran	S002	Database Fundamentals	70
*			





CHAPTER 7

> 7.1 What are Reports?



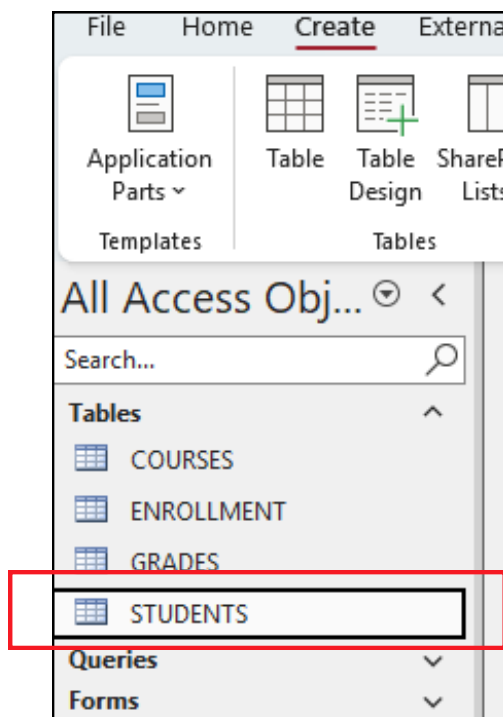
A **report** in Microsoft Access is a tool that helps you present data in a clean, readable, and printable layout – perfect for printing results or sharing summaries. Access allows you to generate reports using data from both tables and queries.

> 7.2 Creating Reports Using the Report Command

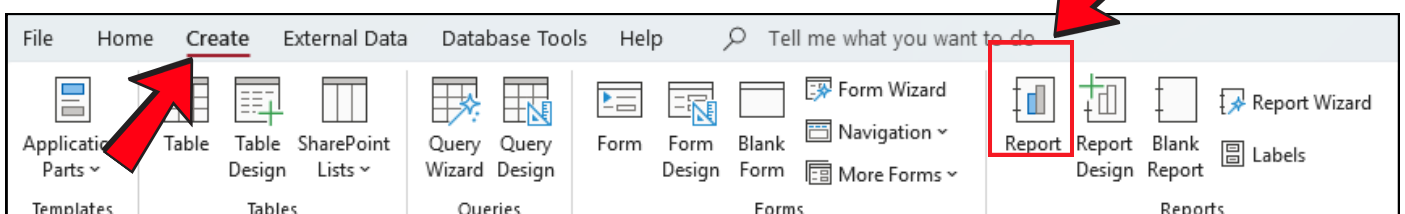
EXAMPLE

Creating a Student List Report

1. Select the **Students Table**



2. Go to the **Create Tab** → Click **Report**.





Your report is created and opened in **Layout View**. Some of your data may appear beyond the page break. To resolve this, resize your fields by selecting a field and dragging its edge to adjust the size. Repeat this process for other fields until everything fits within the page.

Student_ID	Name	DOB	Gender	Address	Contact_Number	Email
S001	Alia binti Ali	1/1/2006	Female	40, Lorong Setia 1, Taman Setia, 21050 Kuantan	012-1234567	aliaali@gmail.com
S002	Bernard Chandran	2/2/2006	Male	Lot 608, Kg Bintang, 26500 Maran	014-1122334	bernard@gmail.com
S003	Hud bin Hamzah	4/4/2006	Male	2, Lorong Cempaka 2/2, Taman Cempaka Indah, 26070 Kuantan	017-4455667	hud@gmail.com
S004	Mawar binti Yusof	5/5/2006	Female	No. 1, Kg Sejahtera, 26600 Pekan	011-7788990	mawar@gmail.com

Page 1 of 1



To save your report, click the **Save button** on the Quick Access Toolbar or right click on the report's tab > select Save. When prompted, enter a name for your report and then click OK.

Save As ? X

Report Name:

Students List Report





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

Views Themes Colors Group & Sort Hide Details Totals

Views Themes Grouping & Totals Controls

Insert Image Page Numbers Date and Time Header / Footer Logo Title Add Existing Fields Property Sheet Chart Settings Tools

All Access Obj... Search...

Tables COURSES ENROLLMENT GRADES STUDENTS Queries Forms

STUDENTS

Tuesday, April 15, 2025 2:37:29 PM

Student_ID	Name	DOB	Gender	Address	Contact_Number	Email
S001	Alla binti Ali	1/1/2006	Female	40, Lorong Setia 1, Taman Setia, 21050 Kuantan	012-1234567	aliaali@gmail.com
S002	Bernard Chandran	2/2/2006	Male	Lot 605, Kg Bintang, 26500 Maran	014-1122334	bernard@gmail.com
S003	Hud bin Hamzah	4/4/2006	Male	2, Lorong Cempaka 2/2, Taman Cempaka Indah, 26070 Kuantan	017-4455667	hud@gmail.com
S004	Mawar binti Yusof	5/5/2006	Female	No. 1, Kg Sejahtera, 26600 Pekan	011-7788990	mawar@gmail.com

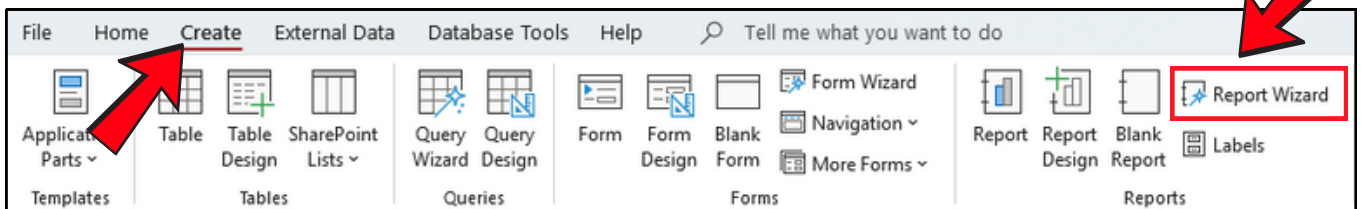
Page 1 of 1



> 7.3 Creating Reports Using the Report Wizard

EXAMPLE Creating a Student Grade Report

1. On the **Create tab** → Click **Report Wizard**.



2. In the *Tables/Queries* drop-down, select:

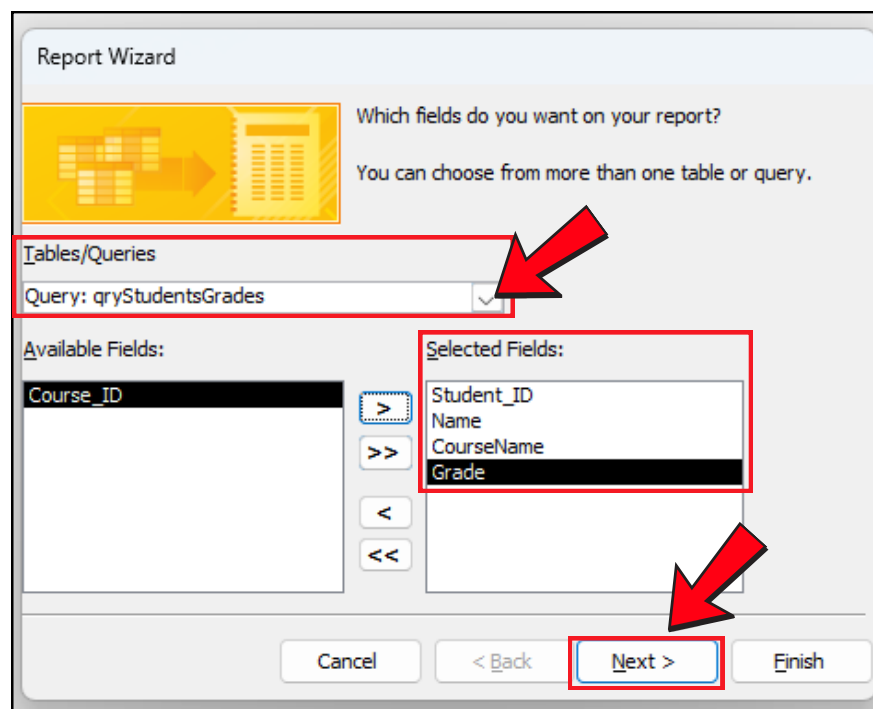
→ *Query: qryStudentsGrades*

3. Select a field from the list on the left, and click the **right arrow** to add it to the report. Or you can simply double click the field from the list on the left and it will be added to the selected fields box. You can include fields from multiple tables or queries by repeating the same steps.

4. For this example, select the fields below:

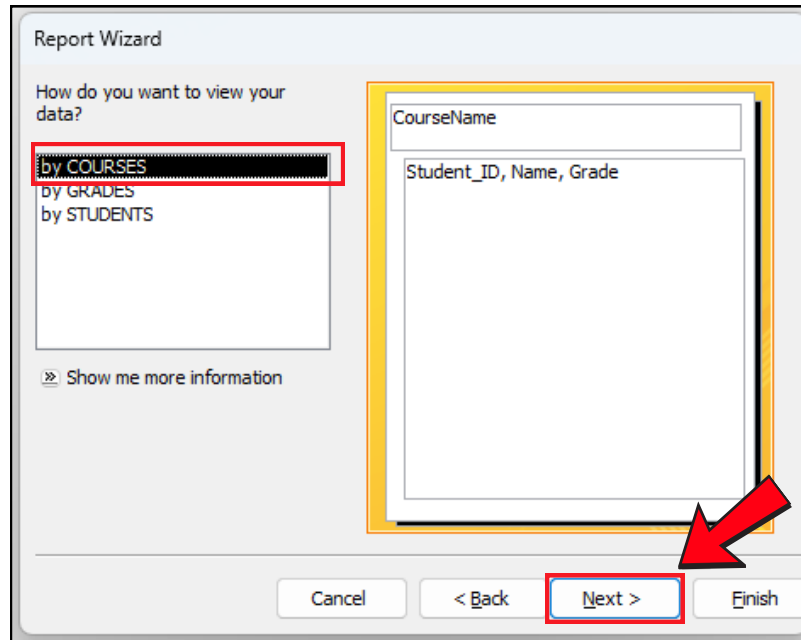
- Student ID
- Name
- Course Name
- Grade

5. Then click **Next**.

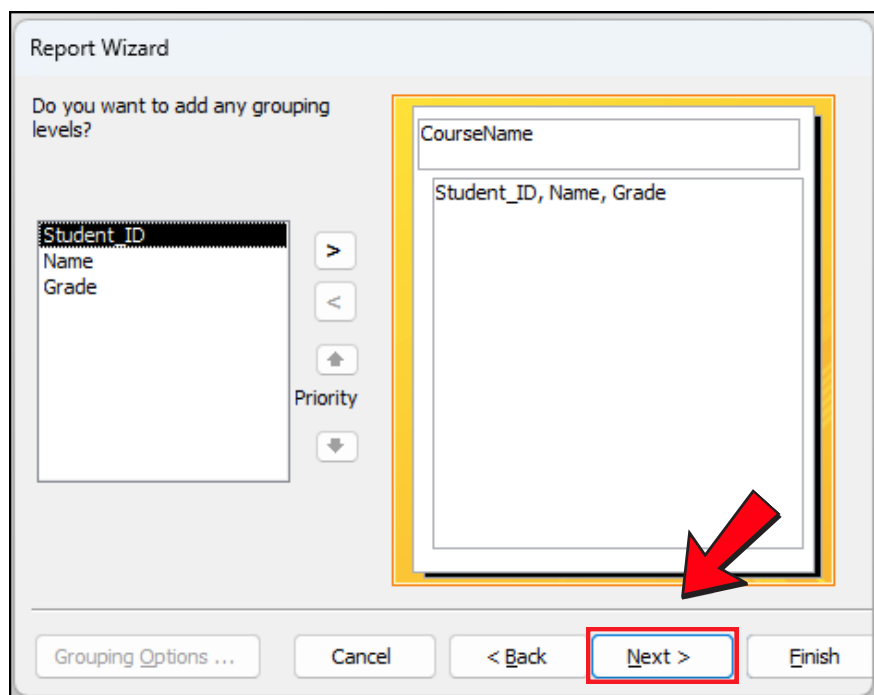


➤ We will view our data by Course Name so students under the same course are listed together.

6. Click **Next**.

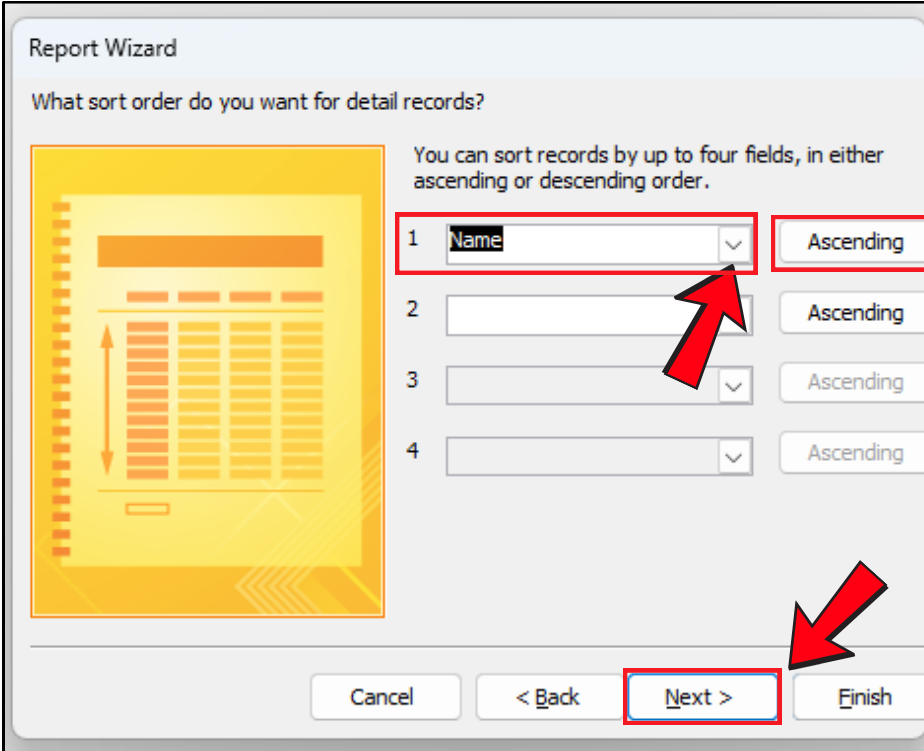


➤ Since our data is already listed by course name, there's no need to add additional grouping levels. Just click **Next**.



Next, we can determine the sort order of our records—up to four fields—in either ascending or descending order.

- Click the top drop-down arrow and choose the first field you want to sort by. Then, to change the sort order, click the button on the right to select either ascending or descending.
- For this practical, choose the field 'Name' and set it to ascending order.
- Click **Next**.



Report Wizard

What sort order do you want for detail records?

You can sort records by up to four fields, in either ascending or descending order.

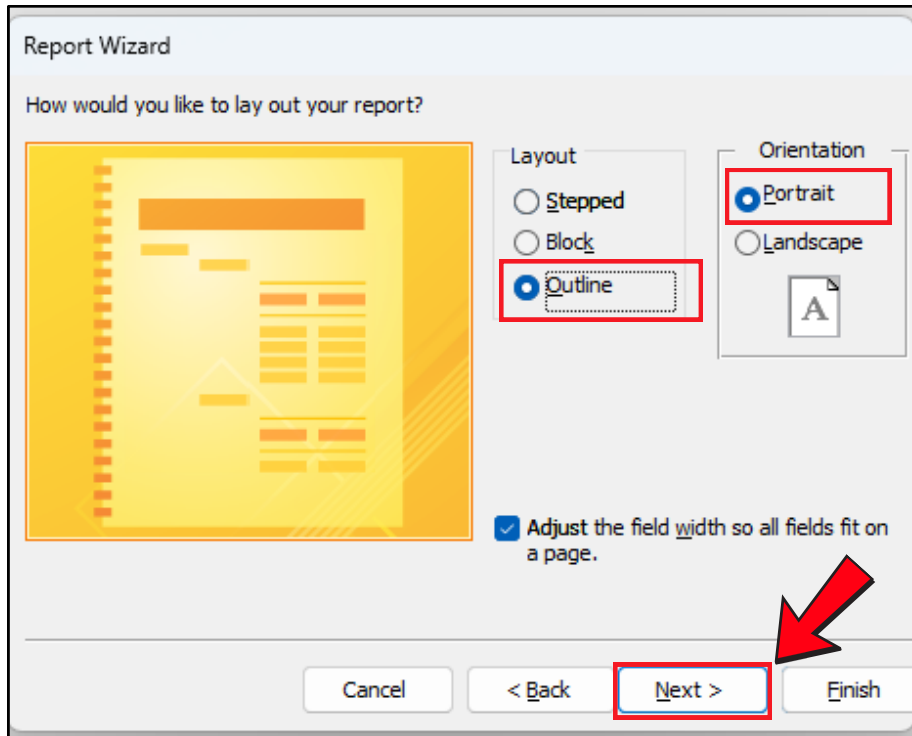
1	Name	Ascending
2		Ascending
3		Ascending
4		Ascending

Buttons: Cancel, < Back, Next >, Finish

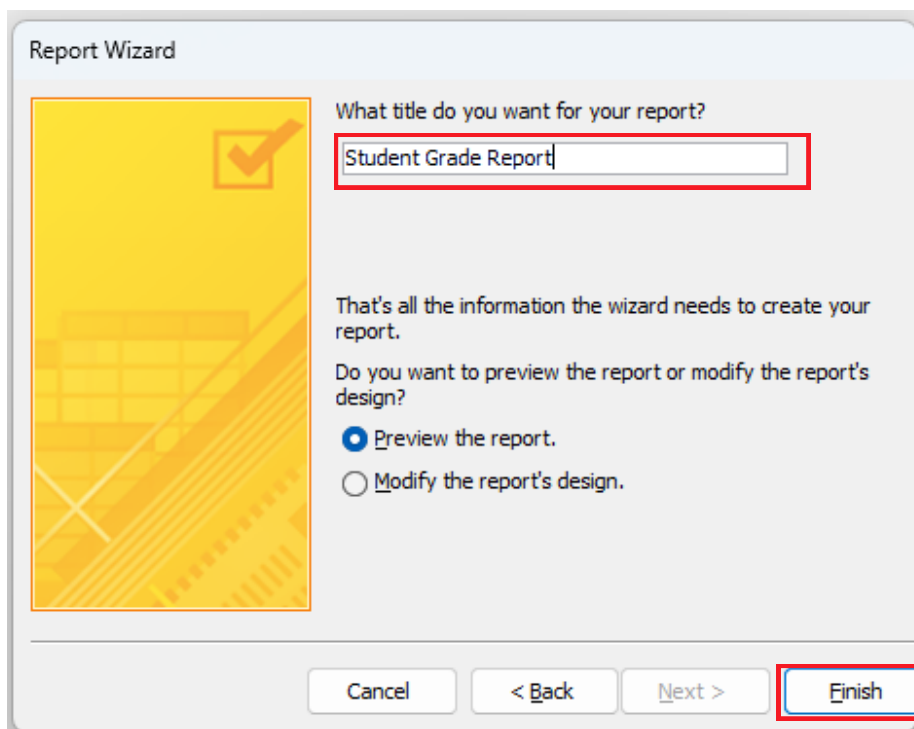
The screenshot shows a 'Report Wizard' dialog box. On the left is a preview of a report grid. The main area asks for the sort order for detail records. It lists four fields for sorting. The first field is 'Name' and is set to 'Ascending'. Red arrows point to the 'Name' dropdown, the 'Ascending' button for the first field, and the 'Next >' button at the bottom.




9. Next, we can choose the layout and orientation of our report. A preview of the layout is shown on the left side. For this practical, choose the 'Outline' layout and 'Portrait' orientation.



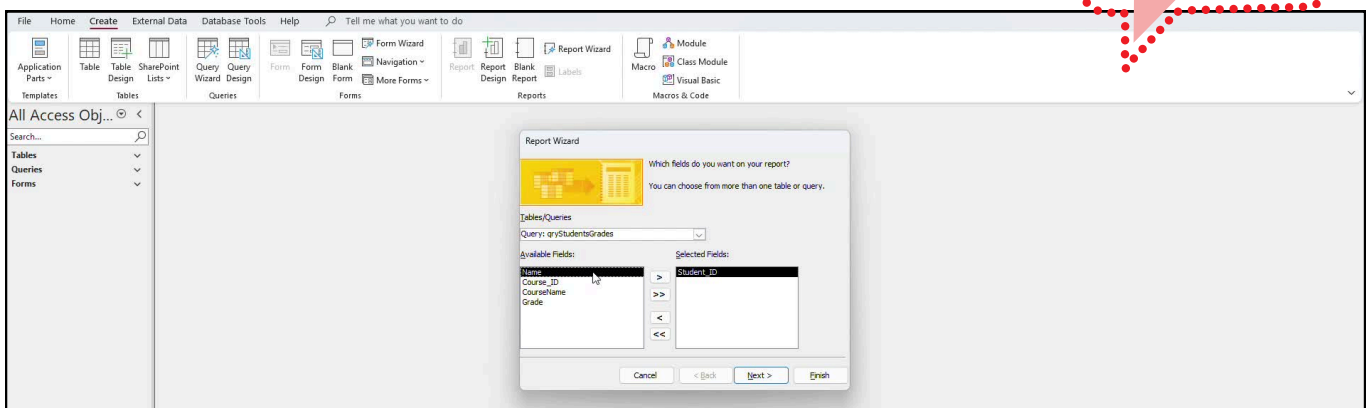
10. Save your report and click **finish**.



 Your report is created and opened in **Print Preview**.

Student Grade Report

CourseName Database Fundamentals		
Name	Student_ID	Grade
Alia binti Ali	S001	85
Bernard Chandran	S002	70
CourseName Basic Mathematics		
Name	Student_ID	Grade
Hud bin Hamzah	S003	90
Mawar binti Yusof	S004	75



7.4 Customizing Reports



Once you have created a basic report in Microsoft Access, the next step is to customize it to meet your specific needs. Customization allows you to control how your data looks and how easily others can understand it. In this section, we will take a step-by-step approach to customizing reports. You will learn how to switch to Design View, adjust the layout, modify fonts and colors, insert images or logos, and fine-tune the organization of your information. By following each step carefully, you will be able to create professional-looking reports that are clear, organized, and visually appealing.

Let's try it out!

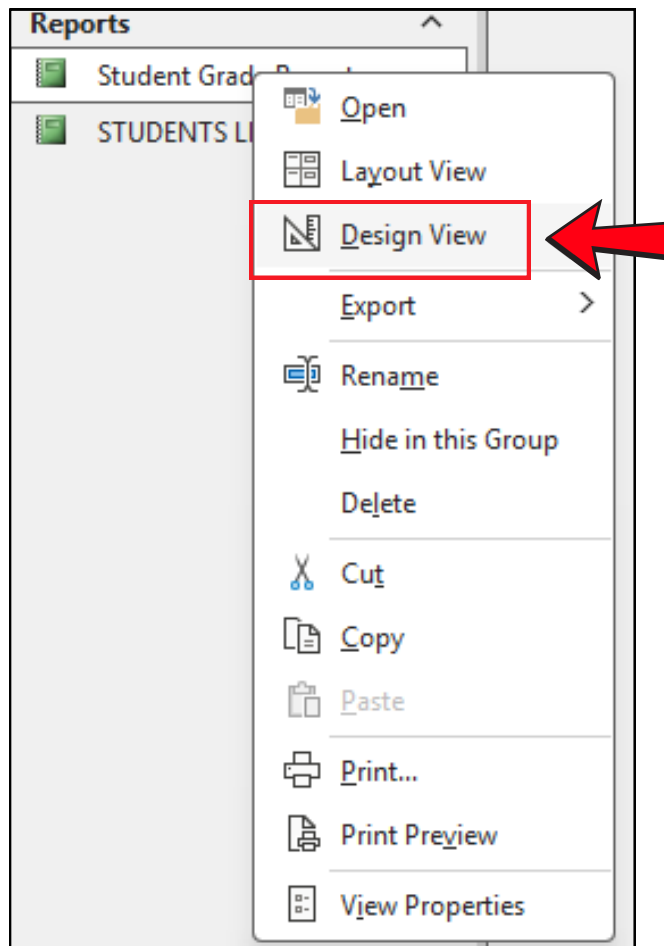


In this practical, we will modify the **Student Grade Report**.



STEP 1 Open Report in Design View

- In the **Navigation Pane**, right-click your report.
- Select **Design View** from the menu.



👉 You will now see the structure of the report, including sections like **Report Header**, **Page Header**, **Detail**, and **Footer**.

➤ STEP 2 Customize the Report Layout

👉 Drag and resize text boxes, labels, and other controls to better fit your data.

👉 Drag the field borders left or right to resize.

👉 Use the **Arrange** tab to align the fields neatly.

👉 In this practical, resize the **CourseName** and **Grade** text boxes and Labels to make them fit better.

Page Header			
Course_ID Header			
CourseName	CourseName		
Name	Student_ID	Grade	
Detail			
Name	Student_ID	Grade	
Page Footer			

➤ STEP 3 Apply Formatting

👉 Format the Field Labels

- Select all the field labels in the report.
- On the Format tab, set the font to Arial Bold and the font size to 12.

👉 Edit the Label Text

- Double-click each label to edit its text as follows:
- Change CourseName → Course Name
- Change Student_ID → Student ID

👉 Adjust Text Alignment

- Select the fields Name, Student ID, and Grade.
- On the Format tab, set their text alignment to Center.

Course_ID Header			
Course Name	CourseName		
Name	Student ID	Grade	
Detail			
Name	Student ID	Grade	
Page Footer			



➤ Add Borders to Labels

- Select the **Name**, **Student ID**, and **Grade** labels.
- Go to the **Format** tab on the ribbon.
- Click the **Shape Outline** command:
 - Choose the **line type** (such as solid or dashed) that you prefer.
 - Select the **line color** you want for the label borders.

➤ Apply Fill Color to Labels

- With the same labels still selected, click the **Shape Fill** command.
- Choose a **fill color** to highlight the labels and make them stand out.

The screenshot shows the Microsoft Word ribbon with the 'Format' tab selected. The 'Shape Outline' dropdown menu is open, displaying various color and line style options. A red arrow points to the 'Shape Outline' command on the ribbon. Another red arrow points to the 'Line Type' dropdown in the menu, which is currently set to 'Solid'. The report content shows a table with columns for 'Name', 'Student ID', and 'Grade', which are highlighted with a blue fill and a red border. The table structure is as follows:


Course Name	CourseName	Name	Student ID	Grade
		Name	Student ID	Grade




Adjust the Font and Alignment of Text Boxes

- Select the **Student_ID** and **Grade** text boxes (the actual boxes that display the data, not the labels).
- Go to the **Format** tab:
 - Change the font to **Arial** and the font size to **11**.
 - Set the text alignment to Center for better readability.



 You can only adjust the **font** and **alignment** of these text boxes.

 **Do not change the content inside the text boxes** – they are linked directly to fields in your table. Editing the content could break the connection to your data!


PRACTICE

Editing the Report Title Label

Customize the Report Title

- Locate the Report Title label in the Report Header section.
- Click to select the label.
- On the Format tab:
 - Change the font style (for example, to Arial Bold or another professional font).
 - Adjust the font size to make the title stand out (for example, size 20 or larger).
 - Set the text alignment to Center or Left, depending on your preferred layout.
- Move the title label to your desired position within the header to balance the design.

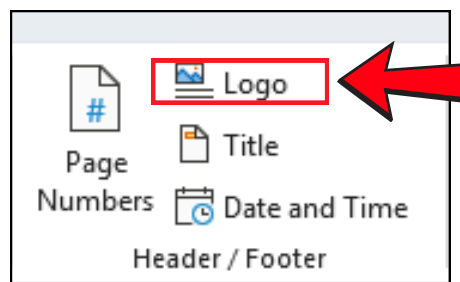


 Make sure the title is easy to read and properly centered (if required) to give your report a polished, professional appearance.



**STEP 4****Insert a Logo**

- In Design View, click anywhere in the **Report Header** section (or another section where you want to place the logo).
- Go to the Design tab on the ribbon.
- Click Logo
- A dialog box will appear – select your logo image file from your computer.
- After inserting, resize the image by dragging the corners to fit neatly in the layout. Move the logo into position – typically in the top-left or top-right corner of the header.

**Optional Touch:**

You can align the logo with the report title or use the **Arrange tab** to ensure consistent spacing and alignment across elements.

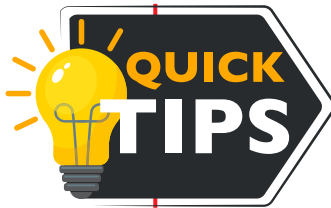




STEP 5


Add Page Header and Footer

Right-click in the report design and select **Page Header/Footer** if they are not already visible.



If you don't see any white space in the **Page Header** or **Page Footer**, don't worry – it just means the section is currently too small to display content.

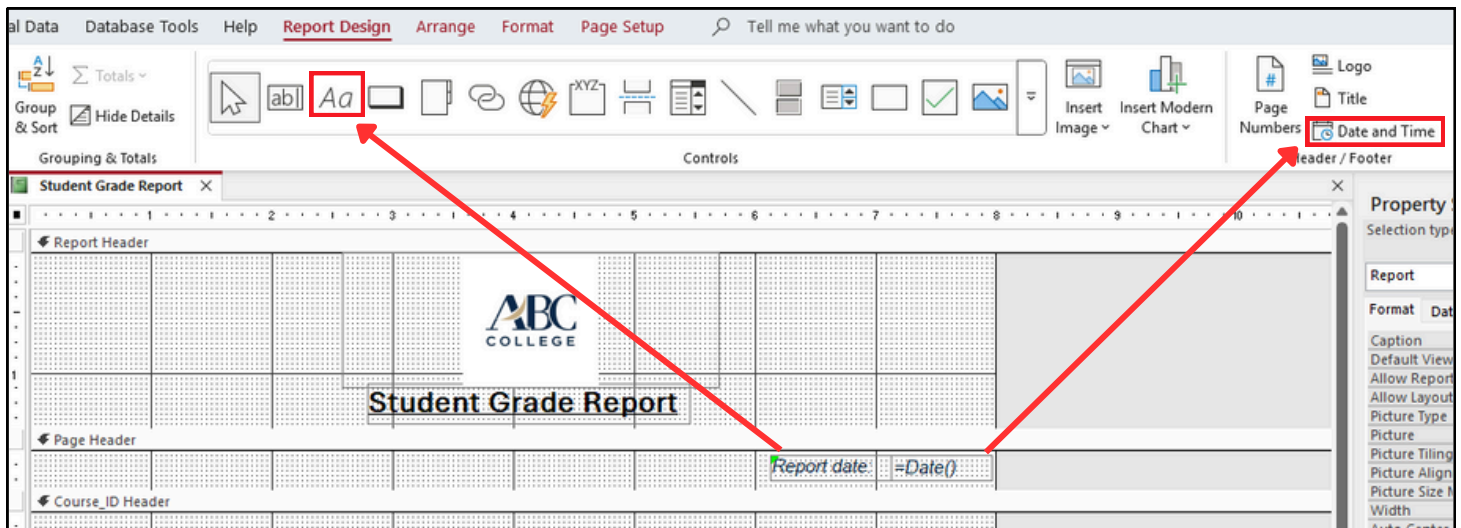
To fix this, **click and drag the bottom edge** of the header or footer to resize it. Once there's enough space, you can easily insert text, page numbers, or other elements.

Report Header									
									
Student Grade Report									
Page Header									
<div style="display: flex; align-items: center;"> Course_ID Header ↑ ↓ </div>									



👉 In the Page Header section, use Label to type custom information. e.g: “Report Date:”.

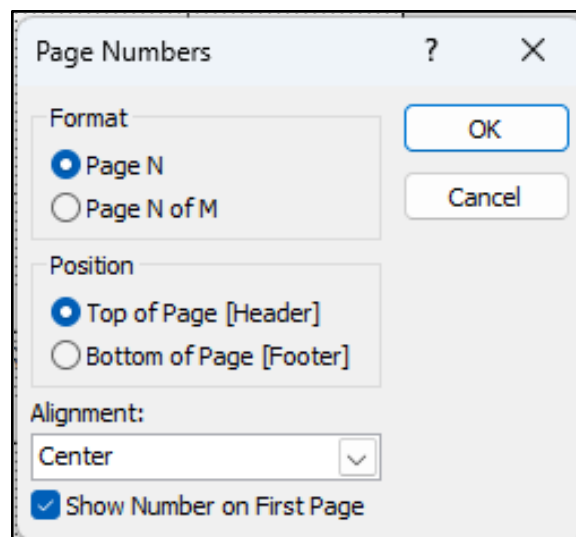
👉 Then, use the "Date and Time" tool to insert the current date.



👉 In the **Page Footer** section, use the **Page Numbers** tool from the **Design tab** to insert page numbering in the format and position of your choice.

👉 For this practical, first delete the existing text box in the footer.

👉 Then, use the Page Numbers tool to insert new page numbering. Choose your desired format, position, and alignment for the page number.

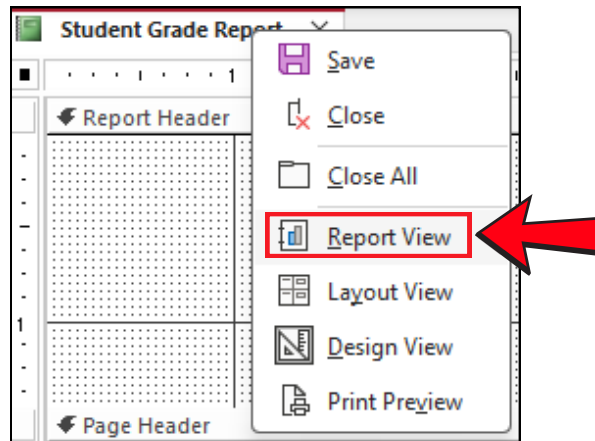




STEP 6

Preview and Save the report

- Right click on the report tab and select **Report View** to see how your report looks with the new labels, borders, and colors applied.
- Make any small adjustments if necessary and save your report.



Check that:



- The labels are easy to read.
- The text is properly centered in the Name, Student ID, and Grade fields.
- The colors and lines make the layout clearer without being too distracting.

EXAMPLE

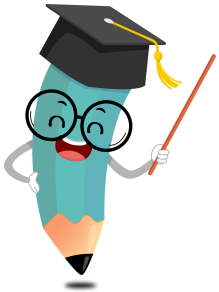
ABC COLLEGE		
Student Grade Report		
		Report date: 29-Apr-25
Course Name	Database Fundamentals	
Name	Student ID	Grade
Alia binti Ali	S001	85
Bernard Chandran	S002	70
Course Name	Basic Mathematics	
Name	Student ID	Grade
Hud bin Hamzah	S003	90
Mawar binti Yusof	S004	75





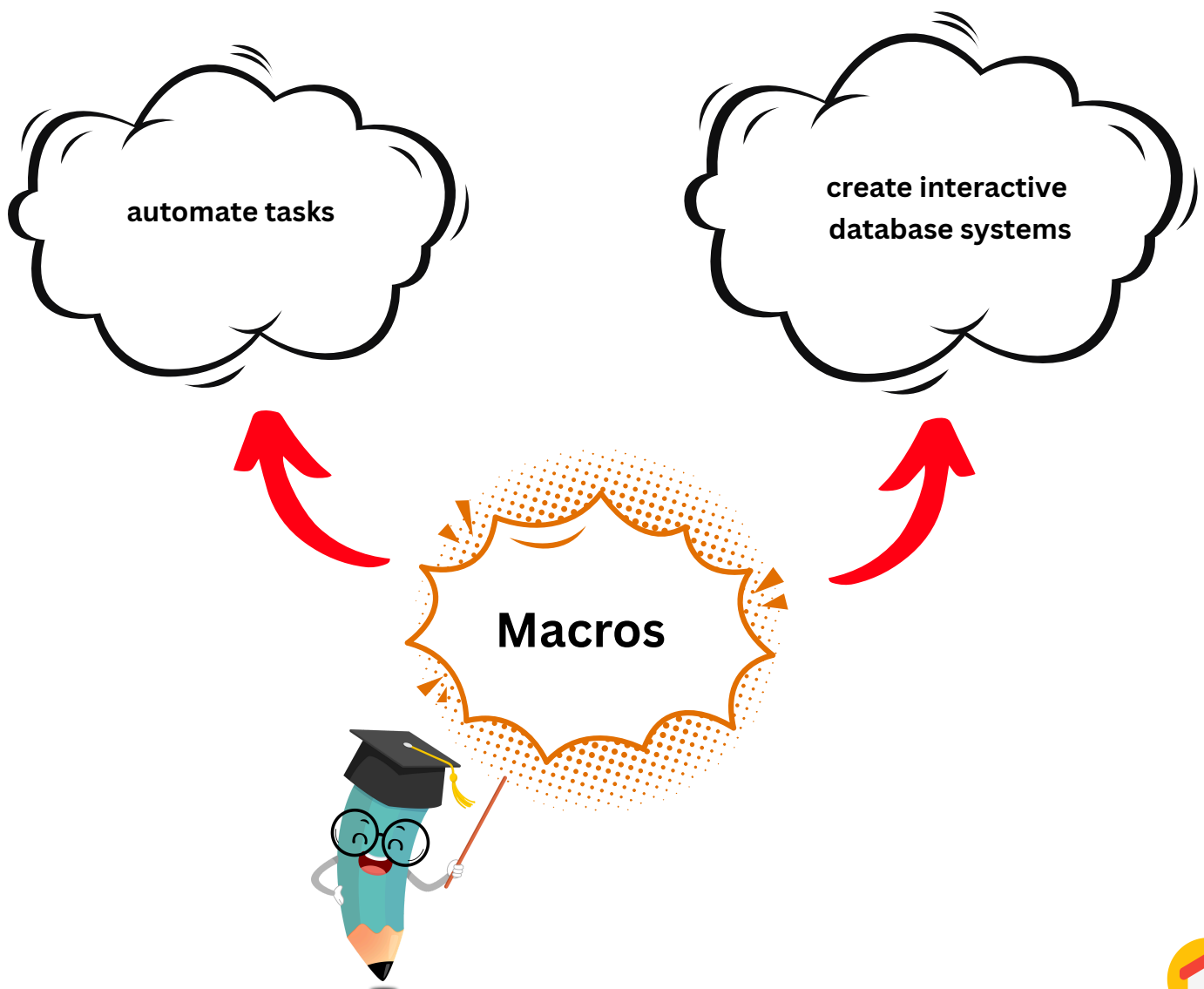
CHAPTER

8



In Microsoft Access, **macros** are powerful tools that let you **automate tasks and create interactive database systems**—without needing to write full-scale programming code. They act like scripts or commands that tell Access what to do in response to events like clicking a button or opening a form.

In the following steps, you'll learn how to create a macro that enhances navigation in your system—**automatically closing the main menu and opening the student form when a button is clicked**. This simple but powerful feature is a great starting point for introducing automation into your database.

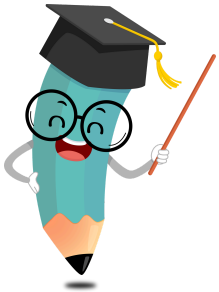


8.1 Creating Simple Macros

GOALS

When a user clicks a button (e.g., "Student Form") on the **Main Menu Form**, Access should:

1. Close the **Main Menu Form** and
2. Open the **Student Form**



STEP 1

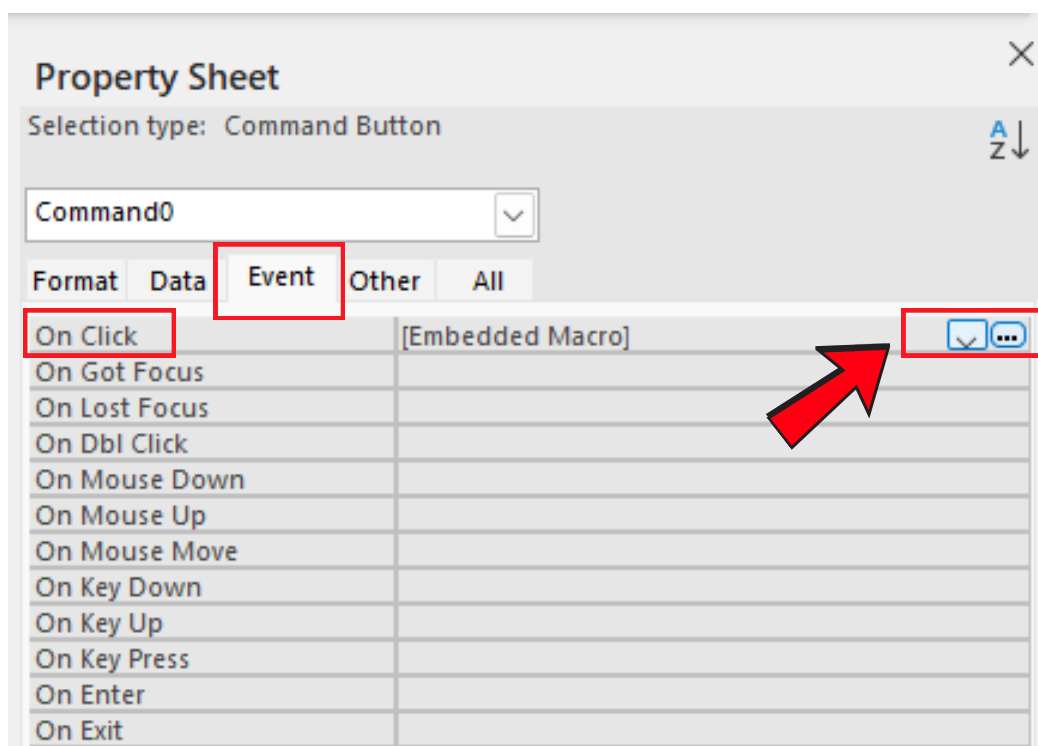
Preview and Save the report

- In the **Navigation Pane**, right-click on your **Main Menu Form**
- Select **Design View**.

STEP 2

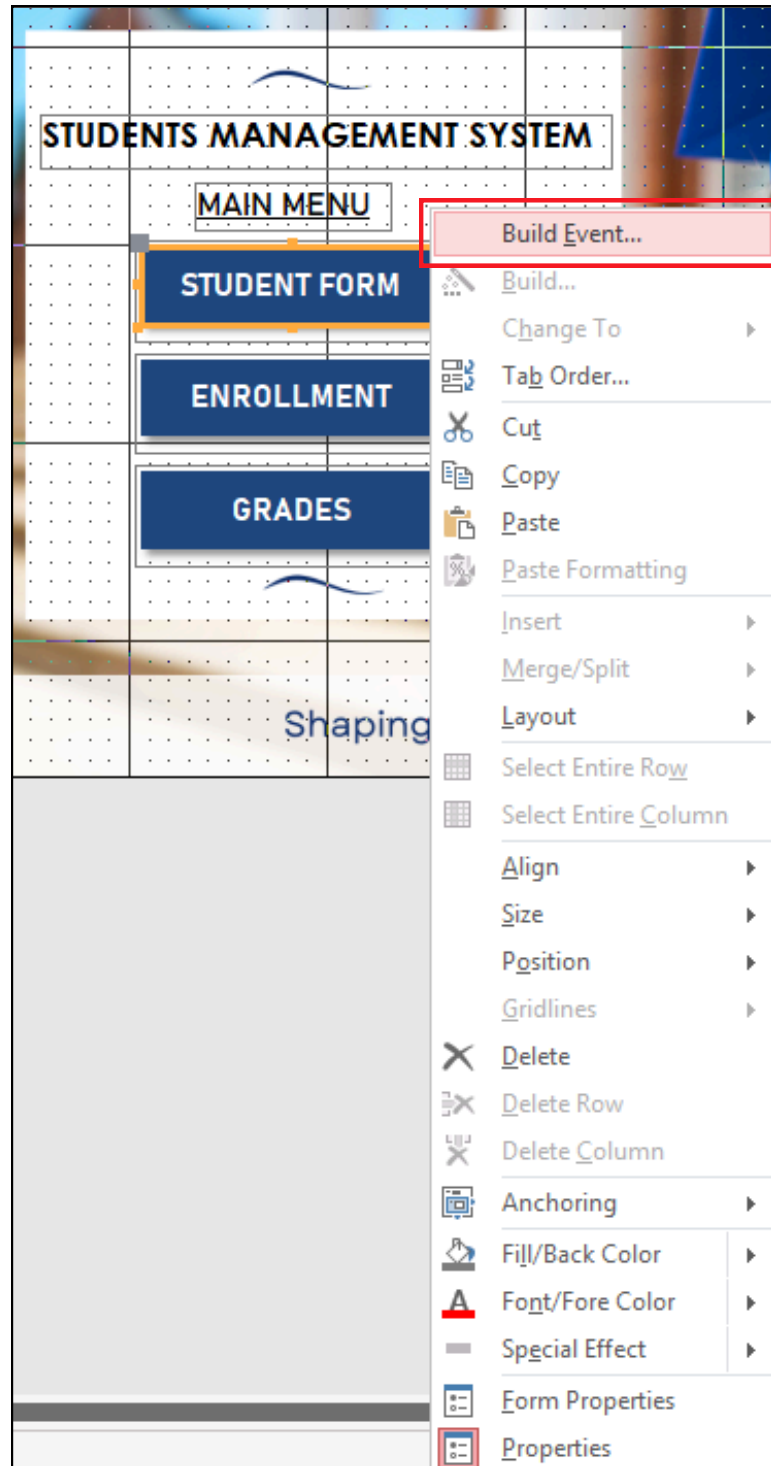
Add Macro to the Button

- Select the **Student Form** button.
- In the **Property Sheet**, go to the **Event** tab.
- Find the event labeled **On Click**.
- Click inside the On Click field, then click the “...” (ellipsis button).





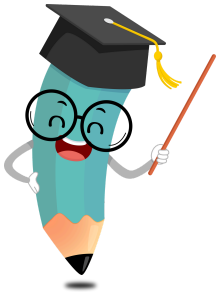
- Right click on the **Student Form** button.
- Choose **build event**





STEP 3

Define the Macro Actions



When creating the button, the Macro Builder automatically includes the action to open the Student Form. We only need to add an additional step to close the Main Menu Form.

MAIN MENU	MAIN MENU : Command0 : On Click
OpenForm	
Form Name	STUDENT FORM
View	Form
Filter Name	
Where Condition	
Data Mode	
Window Mode	Normal

- **To Close the Main Menu Form:**

- Add New Action
- Choose Action: **CloseWindow**
- Arguments:
 - **Object Type:** Form
 - **Object Name:** Main Menu (or whatever your main menu form is named)

CloseWindow	
Object Type	Form
Object Name	MAIN MENU
Save	Prompt



STEP 4

Save the Macro

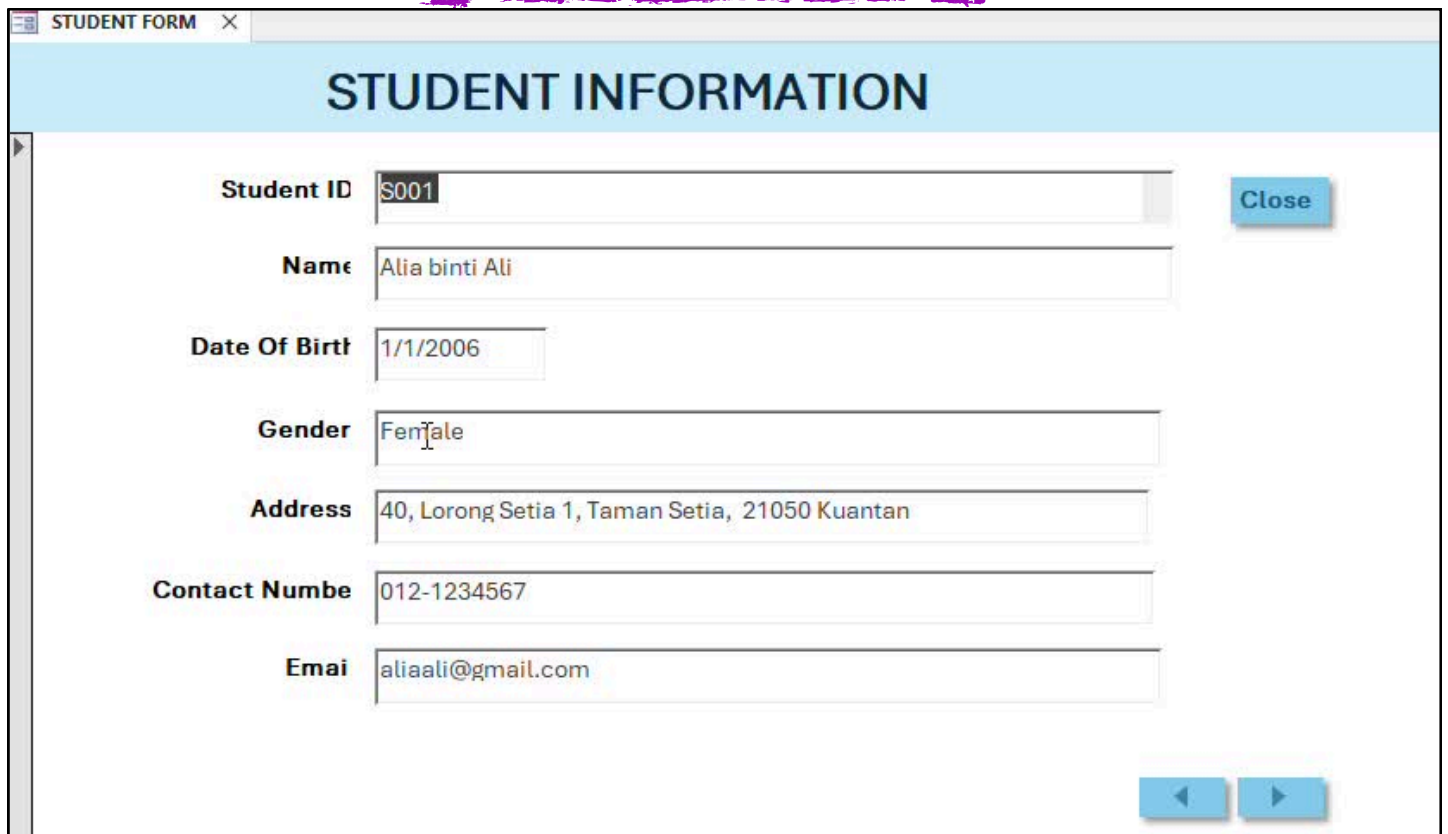
- Click **Save** on the toolbar.
- Close the Macro Builder.

STEP 5

Test the Macro

- Switch the form to **Form View**.
- Click the button.
- It should:
 - **Close the Main Menu Form**
 - **Open the Student Form**

MACRO MAIN MENU



The screenshot displays a Microsoft Access form window titled "STUDENT FORM". The form is in "Form View" and is titled "STUDENT INFORMATION". It contains several text boxes for data entry:

- Student ID:** S001
- Name:** Alia binti Ali
- Date Of Birth:** 1/1/2006
- Gender:** Female
- Address:** 40, Lorong Setia 1, Taman Setia, 21050 Kuantan
- Contact Number:** 012-1234567
- Email:** aliaali@gmail.com

A blue "Close" button is located in the top right corner of the form. At the bottom right, there are two navigation buttons: a left arrow and a right arrow.



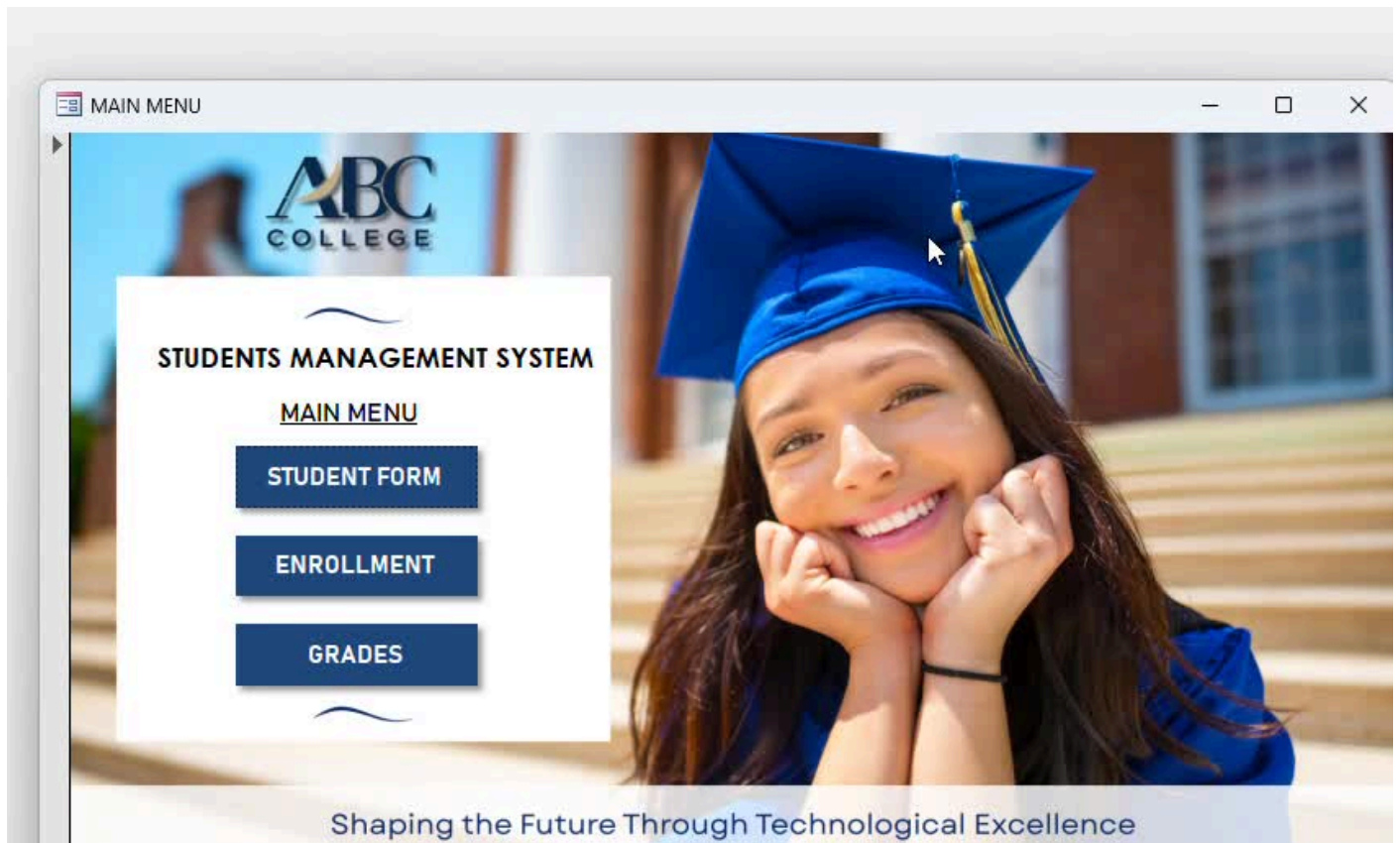


Practice



Add a button to the Student Form that opens the Main Menu Form and closes the Student Form when clicked.

• Answer





CHAPTER

9

By following this step-by-step guide, you have successfully created a functional database system using Microsoft Access. You now have the foundational skills to build and customize databases for various applications.

With continued practice, you can explore more advanced features to enhance your database systems.



- <https://edu.gcfglobal.org/en/access2016/getting-started-in-access/1/>
- <https://edu.gcfglobal.org/en/access2016/working-with-forms/1/>
- <https://edu.gcfglobal.org/en/access2016/designing-a-simple-query/1/>
- <https://edu.gcfglobal.org/en/access2016/creating-forms/1/>
- LearnFree (2016, Apr 8). Access: Designing a Simple Query [video]. Youtube. https://www.youtube.com/watch?v=LUL1nnxUz_c&t=5s
- MyExcelOnline.com (2022, Jun 23). How to Make a Macro in Microsoft Access [video]. Youtube. <https://www.youtube.com/watch?v=Zg14BS2cOAI>



CREATING A SIMPLE DATABASE SYSTEM WITH MICROSOFT ACCESS : A PRACTICAL GUIDE

CREATING A SIMPLE DATABASE SYSTEM WITH MICROSOFT ACCESS

e ISBN 978-629-99371-7-3



KOLEJ KOMUNITI PAYA BESAR

KOLEJ KOMUNITI PAYA BESAR