

Background and Overview:

What Is a Database?

People often need to retrieve specific data rapidly while on the job. For example, a customer service representative may need to locate a customer's order status quickly while the customer is on the telephone. The registrar at a university may have to look up a student's grade point average or rapidly determine if the student has any outstanding fees before processing his or her class registration. A librarian may need to determine if a particular book is available to check out and, if not, when it is scheduled to be returned. The type of software used for such tasks is a database management system. Computer-based database management systems are rapidly replacing the paper-based filing systems that people used in the past to find information. The most common type of database used with personal computers today is a relational database. The basic features and concepts of this type of database software are discussed next.

A database is a collection of related data that is stored on a computer and organized in a manner that enables information to be retrieved as needed. A database management system (DBMS)—also called database software—is the type of program used to create, maintain, and organize data in a database, as well as to retrieve information from it. Typically data in a database is organized into fields, records, and files. A field (today more commonly called a column) is a single type of data, such as last name or telephone number, to be stored in a database. A record (today more commonly called a row) is a collection of related fields, for example, the ID number, name, and address.

What is Microsoft® Access?

Microsoft® Access is a database management system from Microsoft Corporation that combines the relational Access Database Engine with a graphical user interface and software-development tools.

Microsoft® Access stores data in its own format based on the Access Database Engine (formerly Jet Database Engine). It can also import or link directly to data stored in other applications and databases.

Preview from Notesale.co.uk
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- In the list of Personal templates that appears in the middle of the startup screen results pane, click **“Home inventory”**

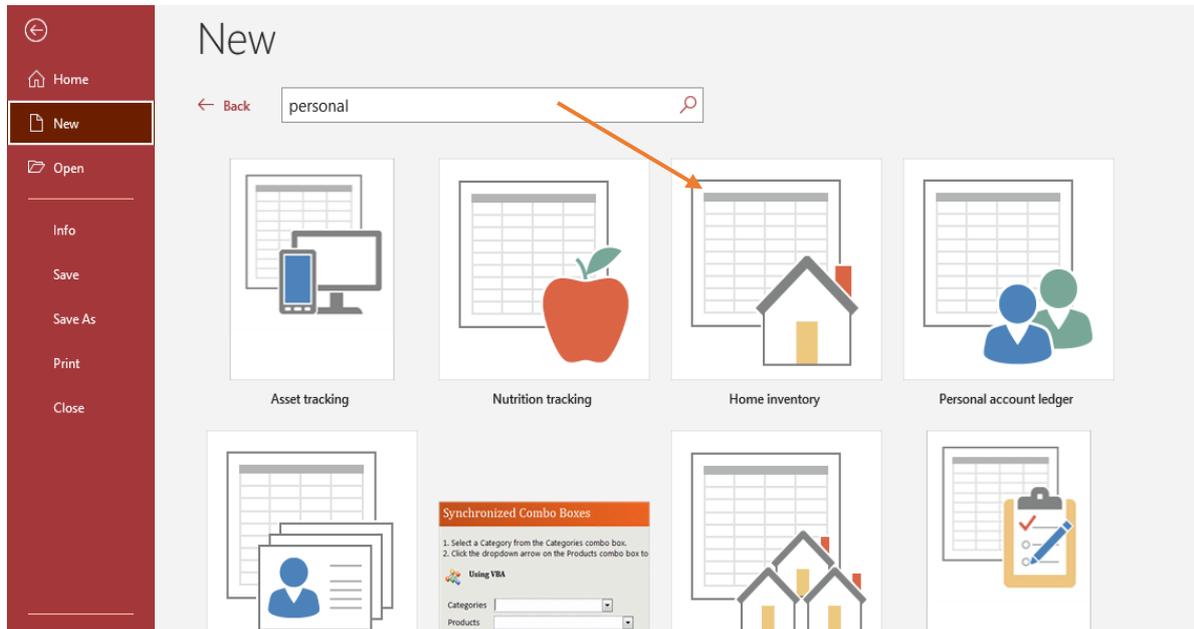


Fig. 6 (Database Templates)

- Click the **“Create button”** at the bottom of the preview pane

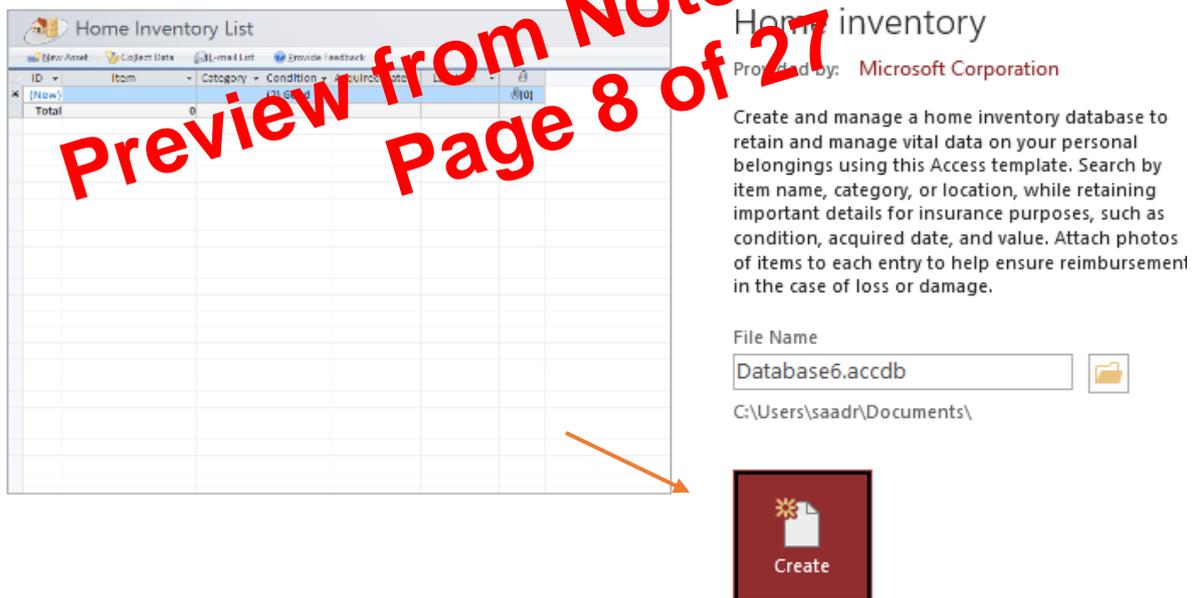


Fig. 7 (Home Inventory)

Navigating using Keyboard:

Keys	Movement
Tab or Right Arrow Key	Moves cursor to the next field
End	Moves cursor to the last field in the current record
Shift + Tab or Left Arrow Key	Moves cursor to the previous field
Home	Moves cursor to the first field in the current record
Down Arrow	Moves cursor to the current field in the next record
Ctrl + Down Arrow	Moves cursor to the current field in the last record
Ctrl + End	Moves cursor to the last field in the last record
Up Arrow	Moves cursor to the current field in the previous record
Ctrl + Up	Arrow Moves cursor to the current field in the first record
Ctrl + Home	Moves cursor to the first field in the first record

Record Navigation Buttons:

Fig. 14 (Navigation buttons)

- Click the “**First record**” button. The selection moves to the first record
- Click the “**Next record**” button. The selection moves to the next record
- Click the “**Last record**” button. The selection moves to the last record
- Click the “**Previous record**” button. The selection moves to the previous record
- Click the “**Search box**” to position the insertion point
- “**Current record box**” shows the position of current record

Task 01: Adding Tables to Database**[Estimated 15 minutes / 15 marks]**

You are a student and you want to keep track of your grades. So, you decided to make a database as follows:

- Create a blank database and Create a Table for each subject
- Mention your grades of every sessional activity in each table and
- Save the document named “**Your Roll No**”

Email the document named with your roll no like “**BSEF19M021**” to the respective TA. The subject of your email should be “Your RollNo_Pre-Lab09”.

In-Lab activities:

Add Record:

The insertion point should be positioned in the first field of the new, blank row at the bottom of the datasheet. Notice the **“asterisk”** in the Record Selector box, which indicates that this is a new record

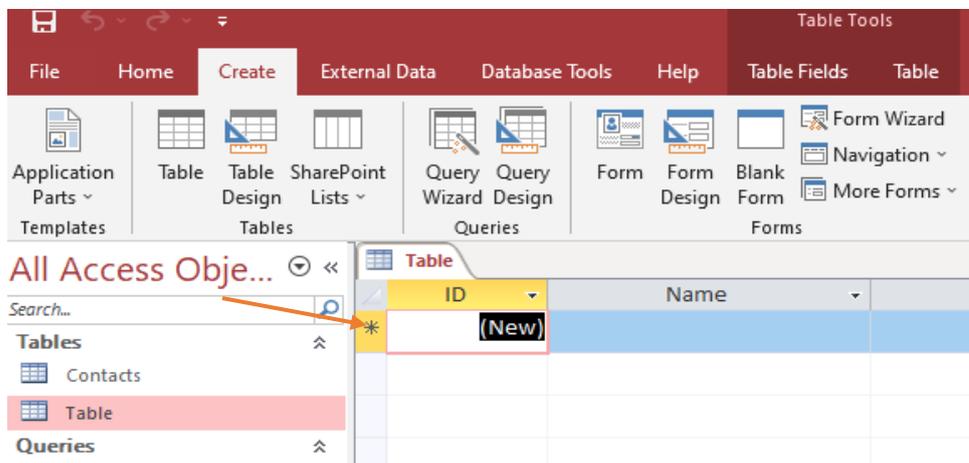


Fig. 15 (Add Record)

- Type **“0”** and then press **“Tab”**. Notice that the asterisk has changed to a **“pencil icon”**
- Type **“Saad”** and press **“Tab”**

Similarly Add Record in the second row.

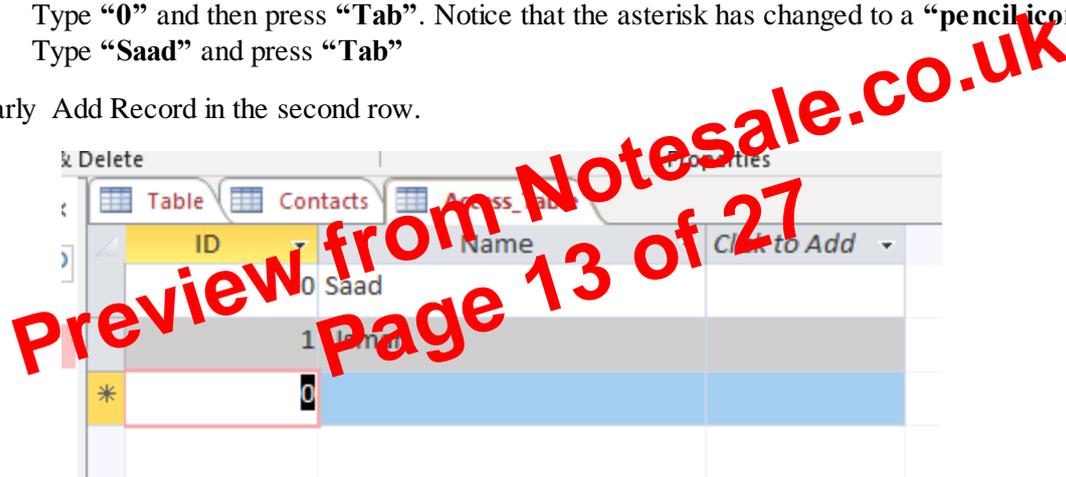


Fig. 16 (Add Record)

Delete Record:

- Click the **“Record Selector box”** to the left of the **“ID”** field of the first record **“0”**

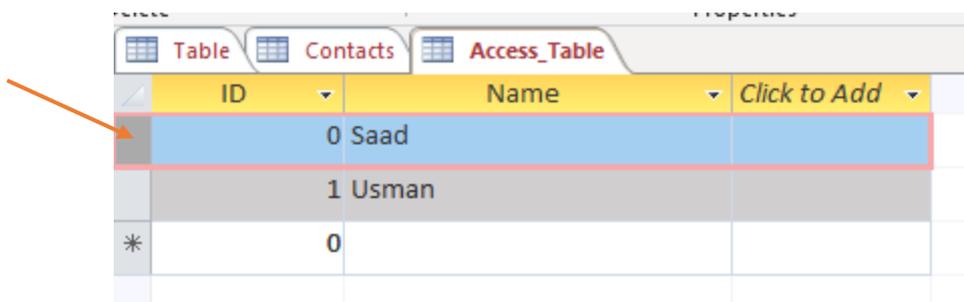


Fig. 17 (Delete Record)