University Information
Technology Services

Microsoft Office Access 2016 for Windows

Introduction to Access

University Information Technology Services

Learning Technologies, Training & Audiovisual Outreach

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University Information Technology Services

Microsoft Office: Access 2016 for Windows

Introduction to Access

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Introduction

Microsoft Access 2016 allows people to effectively and efficiently organize data. The various sections presented in this document will help you to build a solid knowledge foundation of the software.

This booklet is the companion document to the *Intro to Access 2016* workshop. It includes an introduction to the *Microsoft Access 2016* interface, covers the various aspects of database creation and management in *Access 2016*, and will walk you through the process of creating a simple database in *Access 2016*.

Learning Objectives

After completing the instructions in this booklet, you will be able to:

- Identify the components of the *Access 2016* interface.
- Understand how to use the Tell Me feature.
- Create a new database.
- Understand how to create a table.
- Understand the purpose of the primary key.
- Implement error traps.
- Enter descriptions for fields.
- Understand how to add fields.
- Understand how to enter various types of data into the table.

The Office 2016 Interface

The Backstage View

When first opening *Access 2016*, the user will be presented with options to open recent documents, start a new blank database, or select from a number of database templates.

Figure 1 - Backstage View (First opening Access 2016)

1. To enter the *Backstage view* after creating your database, click the **File** tab.

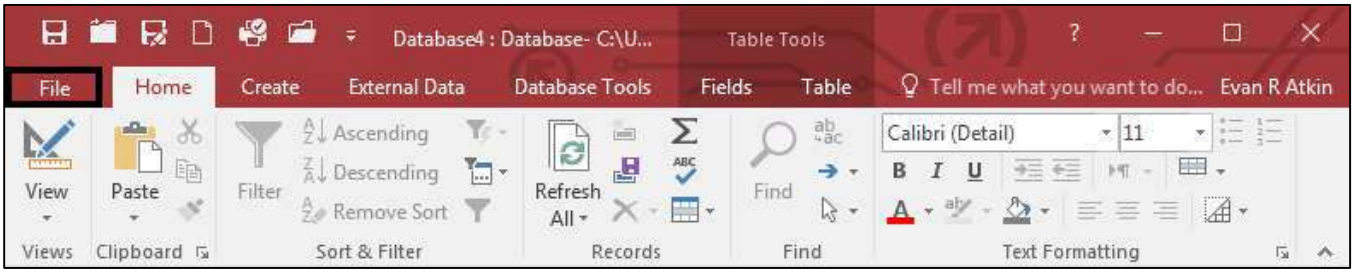


Figure 2 - Access Backstage via File Tab

2. The *Backstage view* will open. From here, you can perform the following actions:
   a. **Info** - Obtain information about your databases (see Figure 3);
   b. **New** - Create new databases and templates (see Figure 3);
   c. **Open** - Open existing databases (see Figure 3);
   d. **Save/Save As** - Save and close databases (see Figure 3);
   e. **Print** - Print and/or preview of your databases (see Figure 3);
   f. **Account** - Access your *Microsoft Office 2016* account information (see Figure 3);
   g. **Options** - Access options to change program settings (see Figure 3);
   h. **Help** - Obtain help information on using *Access 2016* (see Figure 3); and
   i. **Close** - Close *Access 2016* (see Figure 3).

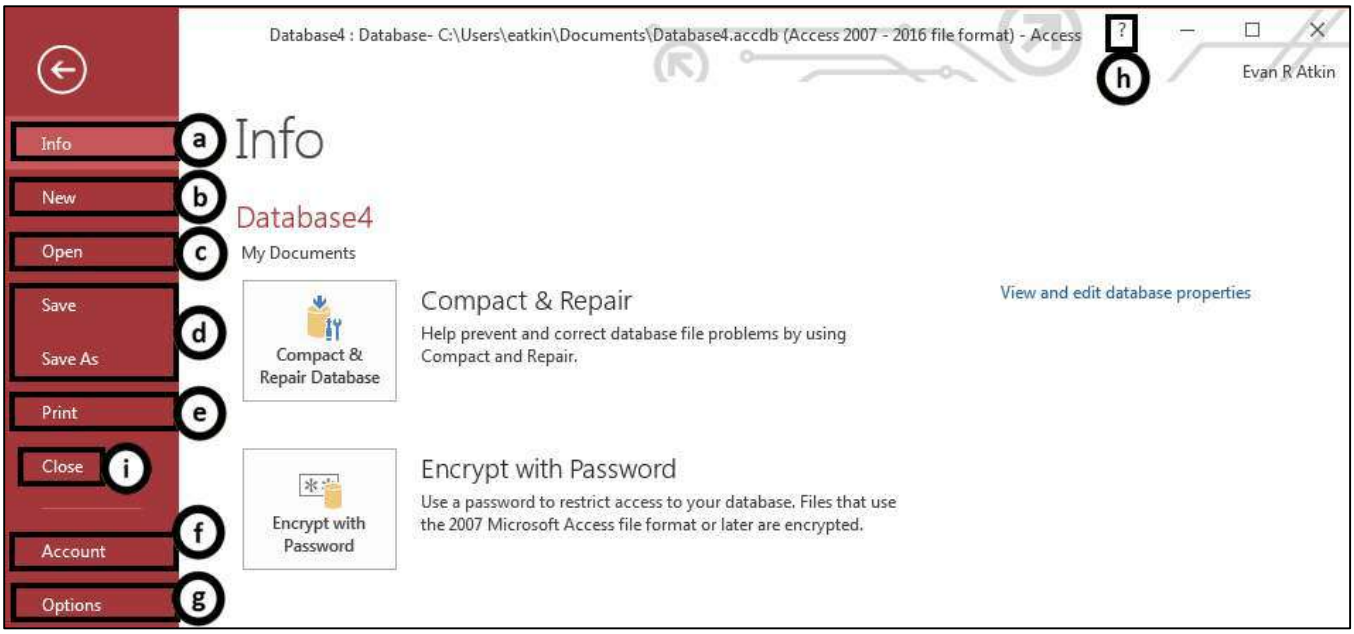


Figure 3 - Backstage View

3. To leave the *Backstage View* and return to your document, click the **arrow** button above *Info*.

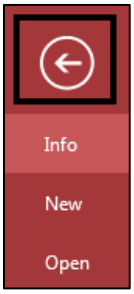


Figure 4 - Leave Backstage View

The Ribbon

The *Ribbon* is a panel that contains groupings of buttons and drop-down lists organized by tabs. Each application in the Office Suite has a different set of tabs that pertain to the functionality of that particular application. Each tab is further divided into *groups*, such as the *Sort & Filter* and *Find* groups.

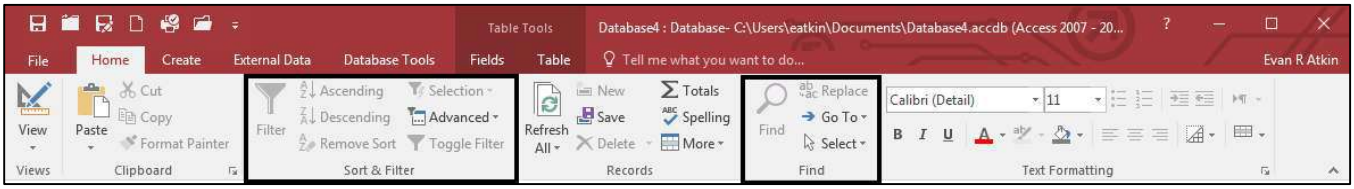


Figure 5 - The Ribbon: Sort & Filter and Find Groups

At the bottom right-hand corner of some groups is the *Dialog Box Launcher*.

Clicking this **button** opens a dialog box for that group containing further option selections for the group.

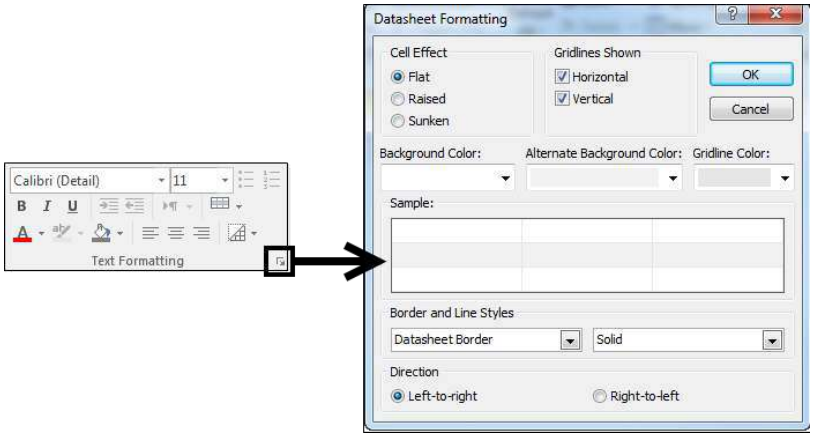


Figure 6 - Dialog Box Launcher

Contextual tabs will appear depending on what you are working on. For example, if you are working in a table, the *Table Tools* tab appears.

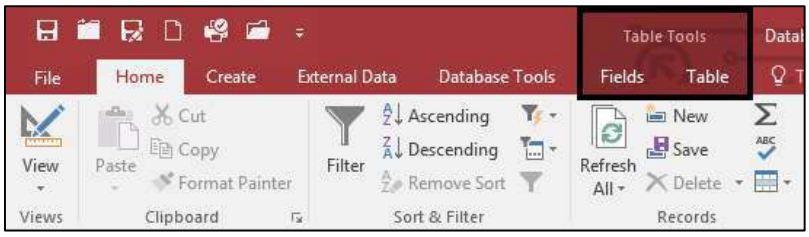


Figure 7 - Contextual Tab

Tell Me

The Tell Me feature allows you to enter words and phrases related to what you want to do next to quickly access features or actions. It can also be used to look up helpful information related to the topic. It is located on the *Menu bar*, above the *ribbon*.

Search for Features

1. Click the **Tell Me** box.

Figure 8 - Tell Me

2. Type the **feature** you are looking for (See Figure 9).
3. In the *Tell Me* drop-down, you will receive a list of *features* based on your search. Click the **Feature** you were looking for (See Figure 9).

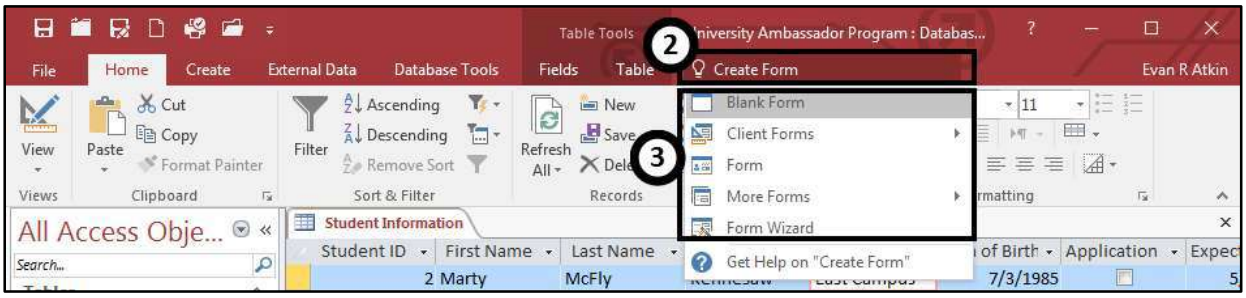


Figure 9 - Select a Feature

4. You will either be taken to the *feature* or a dialog box of that feature will *open*.

Get Help with Access

To receive Microsoft Access Help, either type in the *Tell Me* box or press the *F1* key on the keyboard.

1. Click in the **Tell Me** box.

Figure 10 - Tell Me

2. Type the **question** you want help with (See Figure 11).
3. In the *Tell Me* drop-down, click **Get Help on "question"** (See Figure 11).

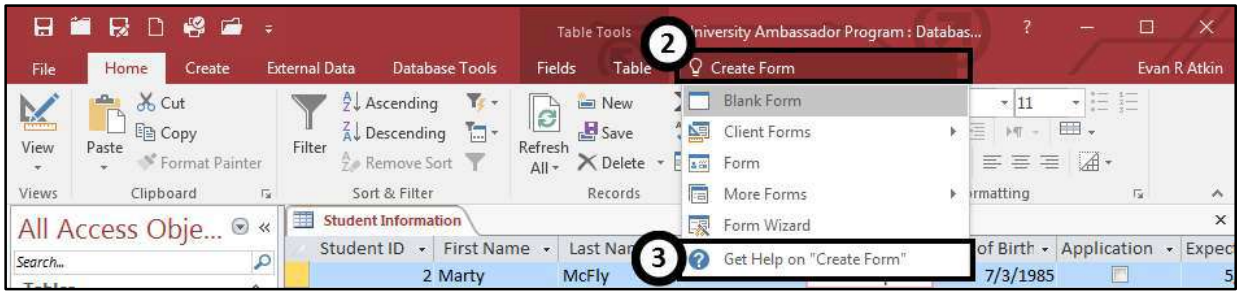


Figure 11 - Get Help on Feature

4. The *Access 2016 Help* dialog box will appear and display a list of help topics based on your search. Click the **topic** you want help with.

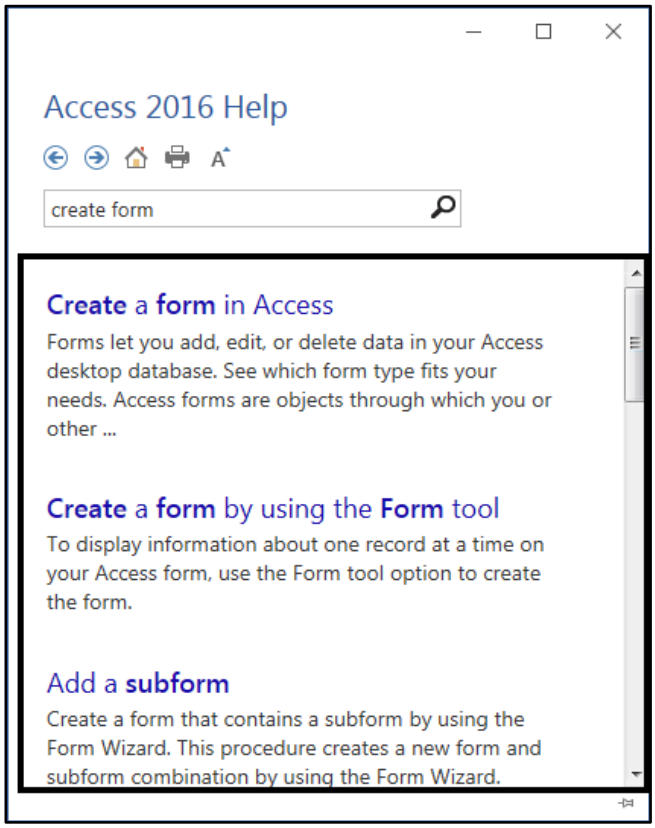


Figure 12 - Word 2016 Help

Creating the Database

When you open *Microsoft Access 2016*, you have the option to create a blank database. Using this database, you will be able to create tables, forms and enter data. The following describes how to create a database in *Microsoft Access 2016*.

1. Click on **Blank desktop database.**

Figure 13 - Blank Desktop Database

2. Enter the **name** of the database in the *File Name* text box.

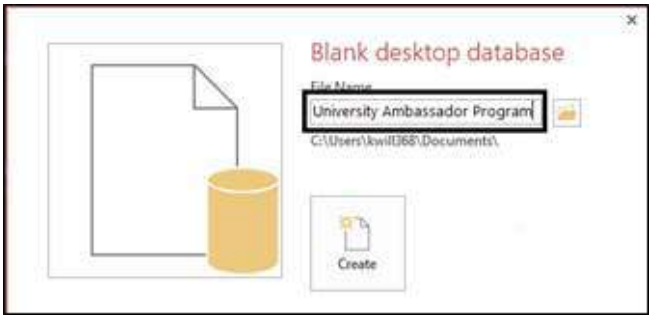


Figure 14 - File Name Box

3. Click on the **Create** button. You will be taken to your *new database.*

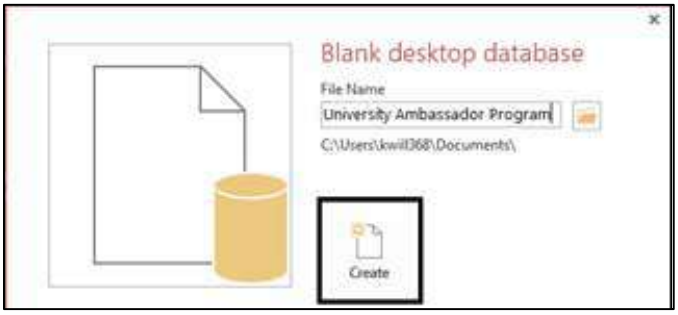


Figure 15 - Create Button

Creating a Table

Upon creating a database, it is recommended that you create a table that will house relevant data. The following instructions explain how to create a table within your database.

1. From the *Fields* tab under *Table Tools,* click on the **View** button.

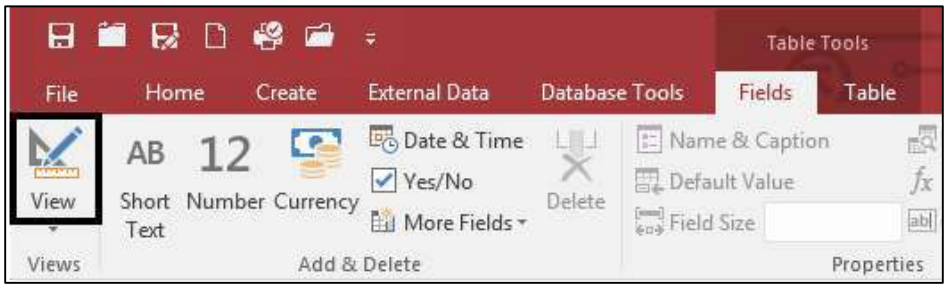


Figure 16 - View Button

Note: Clicking the **arrow** below the *View* button will display a drop-down menu with available views.

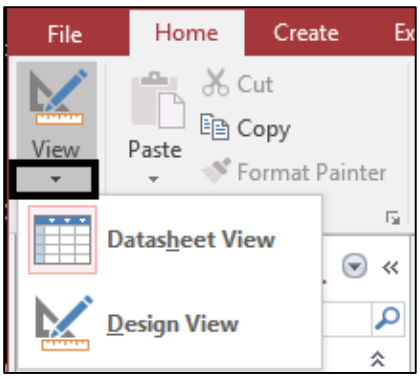


Figure 17 - Design View

2. The *Save As* window will open, prompting you to name your table. Enter the **name** of the table that you are about to create under *Table Name*.

Figure 18 - Table Name

3. Click **Ok.**
4. The *Design view* will open and display the *Field Names* and *Data Types* for the current table. Enter in the appropriate **Field Names** and **Data Types** (e.g. First name, Last name, etc.).
   The following explains the different data types that could be used for the table:
   a. **AutoNumber** - The database will create a unique number for each record that is entered (See Figure 19).
   b. **Short Text** - Use for fields that contain letters and numbers. This option can contain up to 255 characters (See Figure 19).
   c. **Long Text** - Use for fields requiring long entries. Both letters and numbers can be created in this field. This option can hold up to 65,536 characters (See Figure 19).
   d. **Number** - Used when calculable numbers will be required for the field (See Figure 19).
   e. **Date/Time** - Select this choice when you need to enter a date or time (See Figure 19).
   f. **Currency** - Used when currency needs to be entered into the field (See Figure 19).
   g. **Yes/No** - Used when the field requires a yes or no entry. Appears as a check-box in the *Datasheet* (See Figure 19).
   h. **OLE Object** - Allows for the embedding and linking of a number of supported file types (e.g. *PDF*, *PowerPoint*, *Excel*, *Word*, and *Visio* documents, and image and sound clips) (See Figure 19).
   i. **Hyperlink** - Use when email addresses and hyperlinks are required (See Figure 19).
   j. **Attachment** - This option allows the user to attach one or more files to the record (See Figure 19).
   k. **Lookup** (*not displayed*) - This option helps the user create a drop-down list for the field. When this option is selected, the *Lookup Wizard* will begin (See Figure 19).

Field Name	Data Type
ID	AutoNumber
Full Name	Short Text
Memo	Long Text
GPA	Number
Data of Birth	Date/Time
Annual Dues	Currency
Dues Paid?	Yes/No
Profile Picture	OLE Object
Email Contact	Hyperlink
Profile Photo	Attachment

Figure 19 - Field Names and Data Types

Things to Remember When Creating a Table

It is important to remember the following when creating a table.

Primary Key

Records in Access can be organized by a unique, identifying number. The primary key is used to ensure that no two records have the same number. For example, in the table created for student information, it is important that each student has a unique *Student ID*.

Field Name	Data Type
Student ID	AutoNumber
First Name	Short Text
Last Name	Short Text
Hometown	Short Text
Campus	Short Text
Date of Birth	Date/Time
Application Recieved	Yes/No
Account Balance Due	Currency

Figure 20 - Primary Key Field

The primary key can be used with the following data types: *Auto Number, Number, and Text*.

The primary key can be toggled on/off by clicking on the **Primary Key** button located on the *Design* tab.

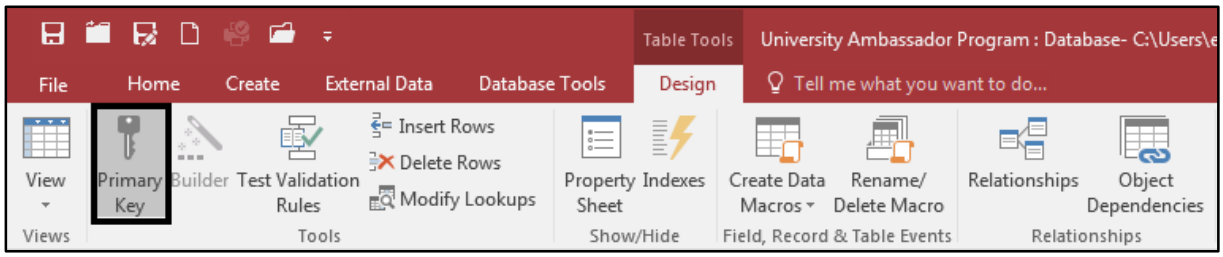


Figure 21 - Primary Key Button

When the *Primary Key* is active, it will appear as a key icon to the left of the field name.

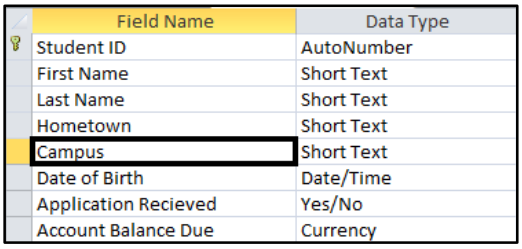
Field Name	Data Type
Student ID	AutoNumber
First Name	Short Text
Last Name	Short Text

Figure 22 - Primary Key Icon

Error Traps

Error traps help to make certain that correct data is entered into the database by users. With an error trap, we can have an error message appear in the event that incorrect data is entered. For example, for the field *Campus,* perhaps the only two campuses that should be entered are *East* and *West Campus.* The following explains how to create an error trap for this field.

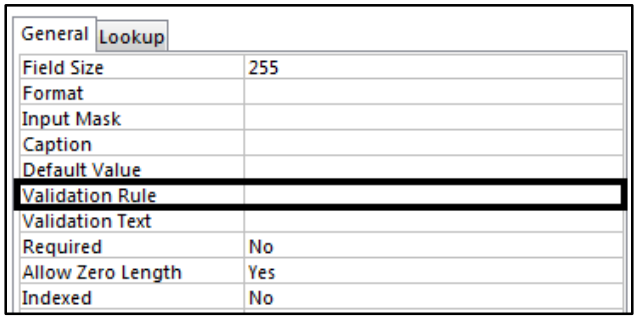
1. Click to select the field **Campus**.



Field Name	Data Type
Student ID	AutoNumber
First Name	Short Text
Last Name	Short Text
Hometown	Short Text
Campus	Short Text
Date of Birth	Date/Time
Application Recieved	Yes/No
Account Balance Due	Currency

Figure 23 - Selecting the Field

2. Click **Validation Rule**, located under the *Field Properties* section.

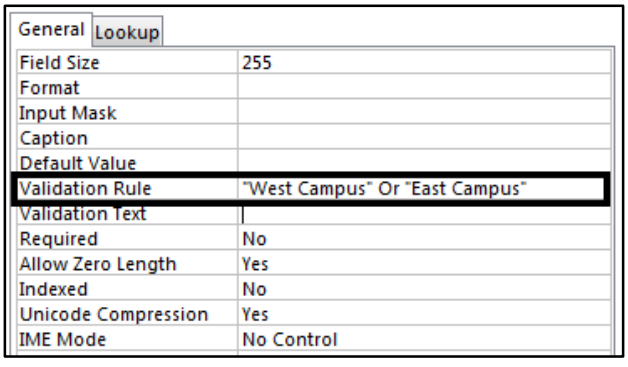


General | Lookup

Field Size	255
Format	
Input Mask	
Caption	
Default Value	
Validation Rule	
Validation Text	
Required	No
Allow Zero Length	Yes
Indexed	No

Figure 24 - Validation Rule

3. To make certain that the user enters only *West Campus* or *East Campus*, enter the following: **"West Campus" or "East Campus".**



General | Lookup

Field Size	255
Format	
Input Mask	
Caption	
Default Value	
Validation Rule	"West Campus" Or "East Campus"
Validation Text	
Required	No
Allow Zero Length	Yes
Indexed	No
Unicode Compression	Yes
IME Mode	No Control

Figure 25 - Entering the Validation Rule

Note: If you were working with numbers, you could also enter a formula to make certain that only a specific range of numbers are entered. For example, if you wanted to make sure that only numbers from 0 to 100 are entered, you would enter the following: **>= 0 and <= 100.**

4. Select **Validation Text**.

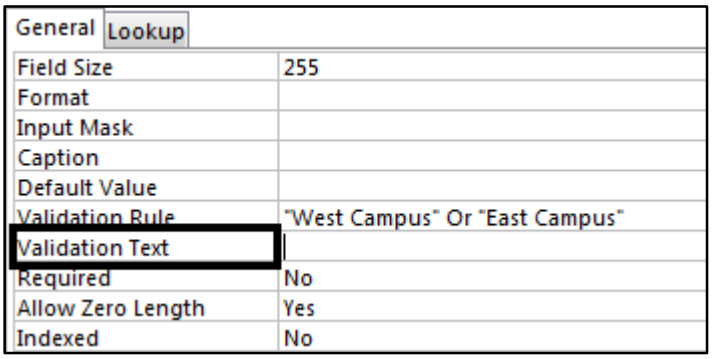


Figure 26 - Validation Text

5. Whatever appears in the *Validation Text* field is the message that will appear if a user attempts to enter data that violates the *Validation Rule* that was entered in Step 3. For example, the following is an example of a message that could be entered: **Invalid Entry! Please enter one of the following campuses: West Campus or East Campus.**

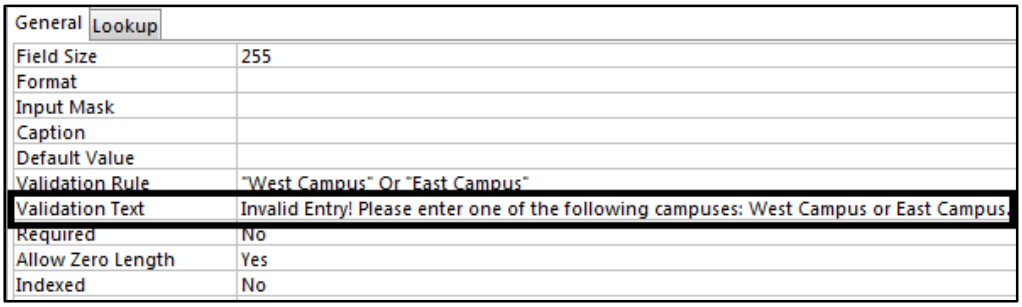


Figure 27 - Validation Text String

Descriptions

The *Description* column is a place where you can provide instructions to users who will be entering data into the table.

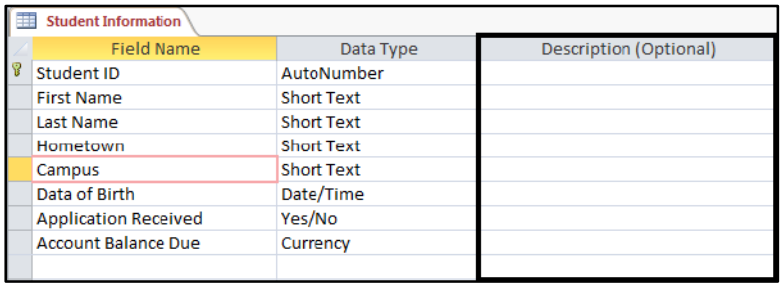
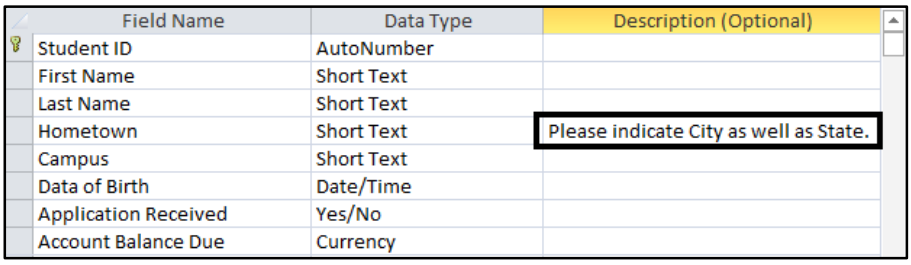


Figure 28 - Description Field

The following explains how to create a *description* for a field.

1. Place your **cursor** in the *Description* column next to the field of your choice (See Figure 29).
2. Enter a **description** (See Figure 29).



Field Name	Data Type	Description (Optional)
Student ID	AutoNumber	
First Name	Short Text	
Last Name	Short Text	
Hometown	Short Text	Please indicate City as well as State.
Campus	Short Text	
Data of Birth	Date/Time	
Application Received	Yes/No	
Account Balance Due	Currency	

Figure 29 - Enter a Description

Adding Fields

Once the table has been completed for the database, it is possible to add fields to the datasheet. The following explains how to add a new field for *Expected Graduation Date* between *Application Received* and *Account Balance Due*.

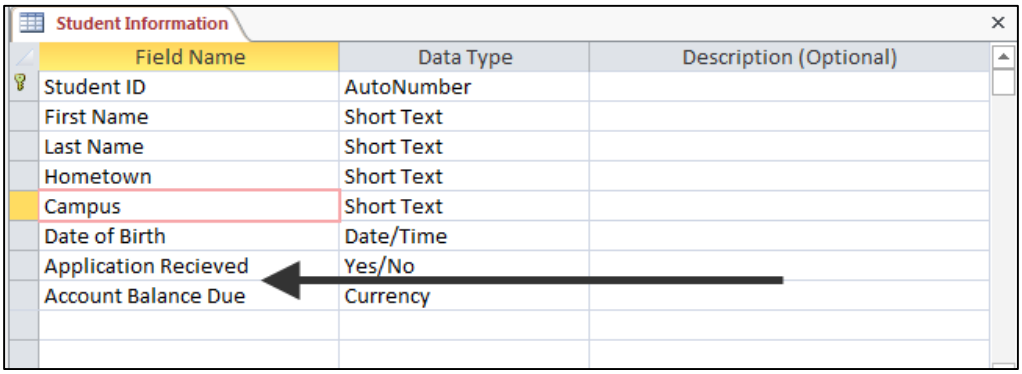


Figure 30 - Adding a field

1. Right-click on the **Account Balance Due** field.

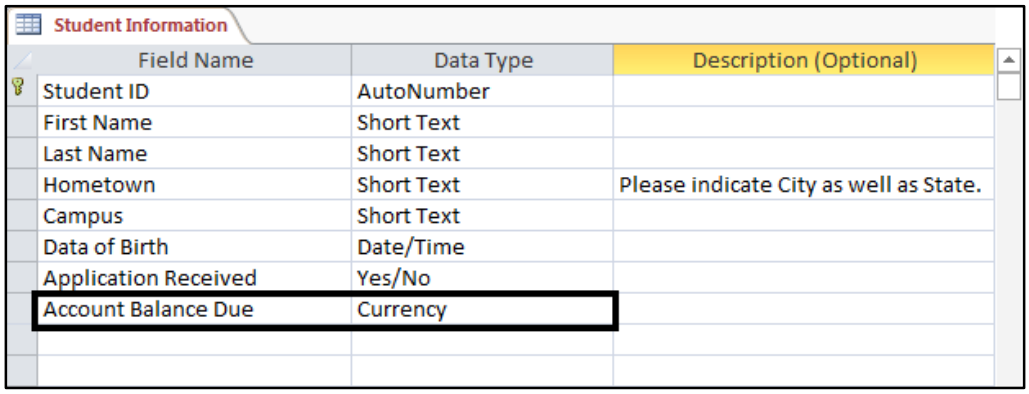


Figure 31 - Right Click on the Desired Field

2. A *context sensitive* menu will appear. Click **Insert Rows**.

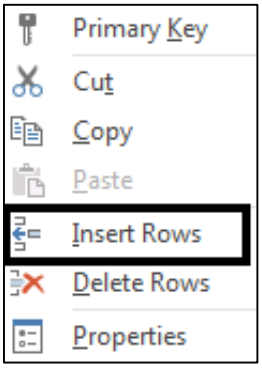


Figure 32 - Insert Rows

Note: If you wish to delete a field, click **Delete Rows**.

3. A new row will be inserted between *Application Received* and *Account Balance Due.* Type **Expected Graduation Date** into the field.

Field Name	Data Type
Student ID	AutoNumber
First Name	Short Text
Last Name	Short Text
Hometown	Short Text
Campus	Short Text
Date of Birth	Date/Time
Application Recieved	Yes/No
Expected Graduation Date	Short Text
Account Balance Due	Currency

Figure 33 - New Row

4. Next to *Expected Graduation Date* in the *Data Type* drop-down, select **Date/Time**.

Field Name	Data Type	Description (Optional)
Student ID	AutoNumber	
First Name	Short Text	
Last Name	Short Text	
Hometown	Short Text	Please indicate City as well as State.
Campus	Short Text	
Data of Birth	Date/Time	
Application Received	Yes/No	
Expected Graduation Date		
Account Balance Due		

Short Text
Long Text
Number
Date/Time
Currency
AutoNumber

Figure 34 - Date/Time

Default Values

As the database designer, you have the option of including *Default Values*. For example, in the table below, suppose that 75% of the entries for *Campus* will be *East Campus*. You could include a default value of *East Campus* to make data entry easier for the user.

The following explains how to include the default value of *East Campus* for *Campus.*

1. Select the **Campus** field**.**

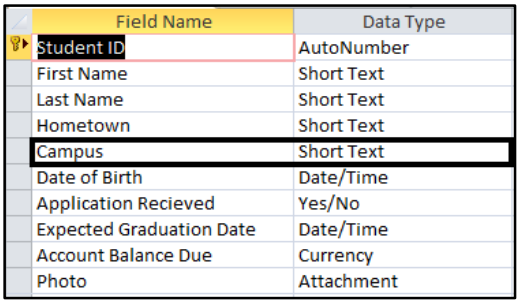


Figure 35 - Select the Campus Field

2. In the *Field Properties*, click the **Default Value** field.

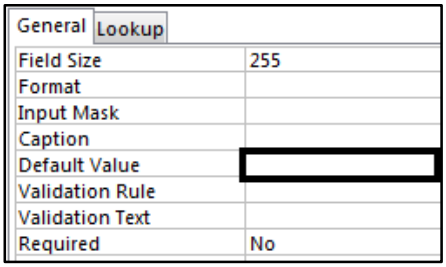


Figure 36 - Click Default Value

3. Enter the *Default Value* that you wish to appear in the *Default Value field.* In this case, we will enter **East Campus**.

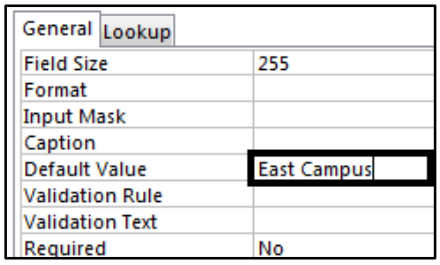


Figure 37 - Enter the Default Value

4. When the user creates a new record, *East Campus* will appear as a default for the field *Campus*. This will make data entry easier. However, another value can be entered for *Campus*, if desired. For example, *West Campus* could be entered in place of *East Campus*.

Creating a Drop-Down List

A drop-down list can make the job of the data entry person easier. When a drop-down list is available, the user simply clicks the list and selects the option of his or her choice.

For example, we can set a drop-down list for *Hometown* if there only a certain number of cities that are to be selected. If the cities for the *Hometown* field were *Atlanta*, *Kennesaw*, and *Macon*, the user would simply click the list and select the city from the drop-down menu. This eliminates a lot of typing for the user.

The following steps explain how to create a drop-down list for the field *Hometown*.

1. Next to the *Hometown* field, click the **drop-down arrow**.

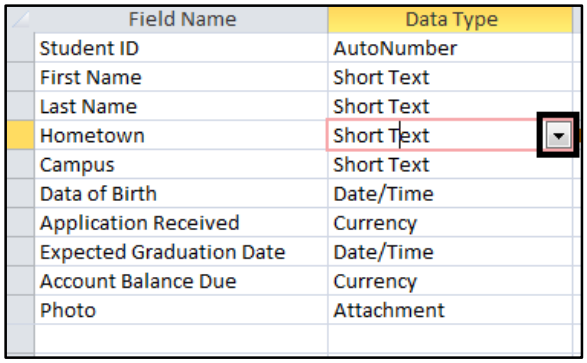


Figure 38 - Select the down-arrow

2. From the *drop-down* menu, click **Lookup Wizard**.

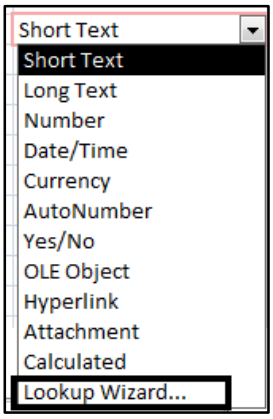


Figure 39 - Lookup Wizard

3. The *Lookup Wizard* window will appear. Click **I will type in the values that I want**.

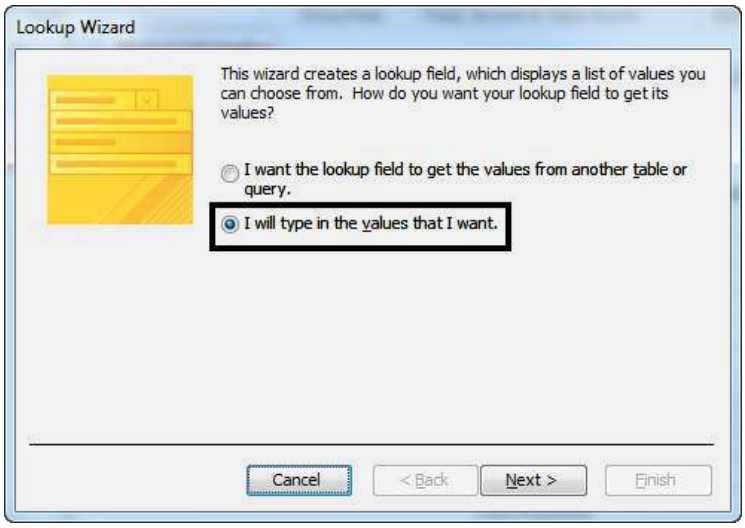


Figure 40 - Lookup Wizard: Select I will type in the values I want

4. Click the **Next** button.
5. Under *Column 1,* type the **values** that you want to appear.

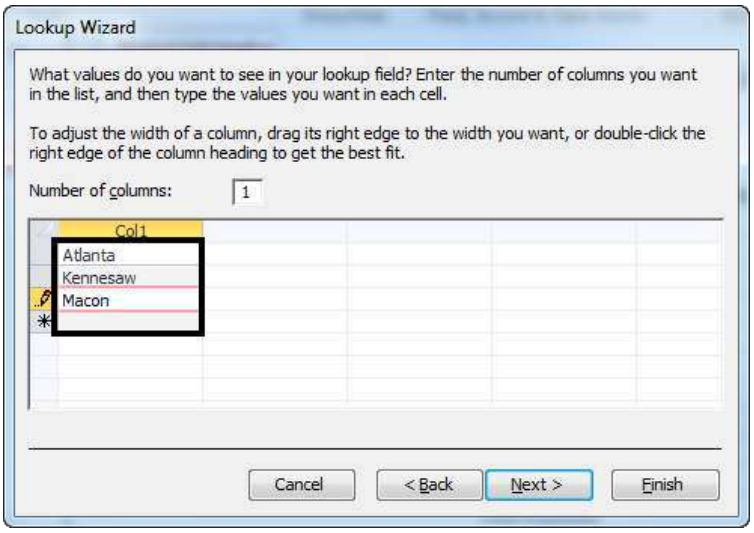


Figure 41 - Type the values you want to appear

6. Click **Next**.
7. Click **Finish**.

Opening and Closing the Table

When you are finished creating the table, it can be closed by clicking the **X** in the upper-right corner of the table.

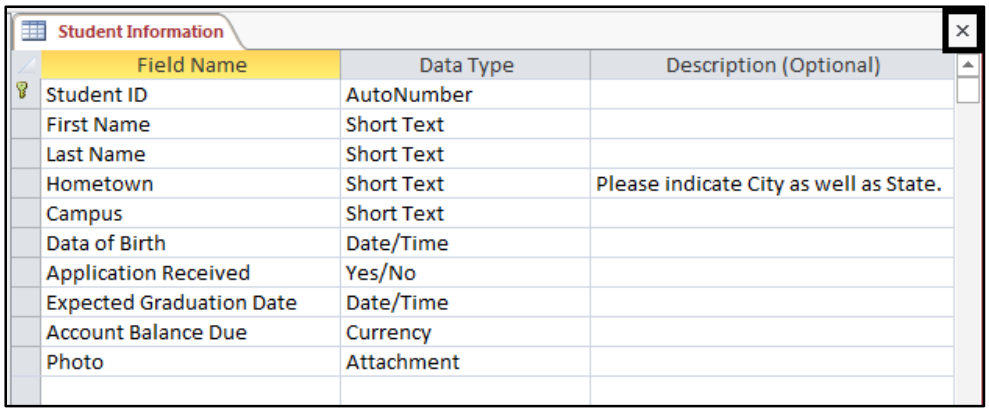


Figure 42 - Clicking X to Close the Table

To open the table again, double-click the **name of the table** that you want to open. The name of the table will appear on the left area of the window.

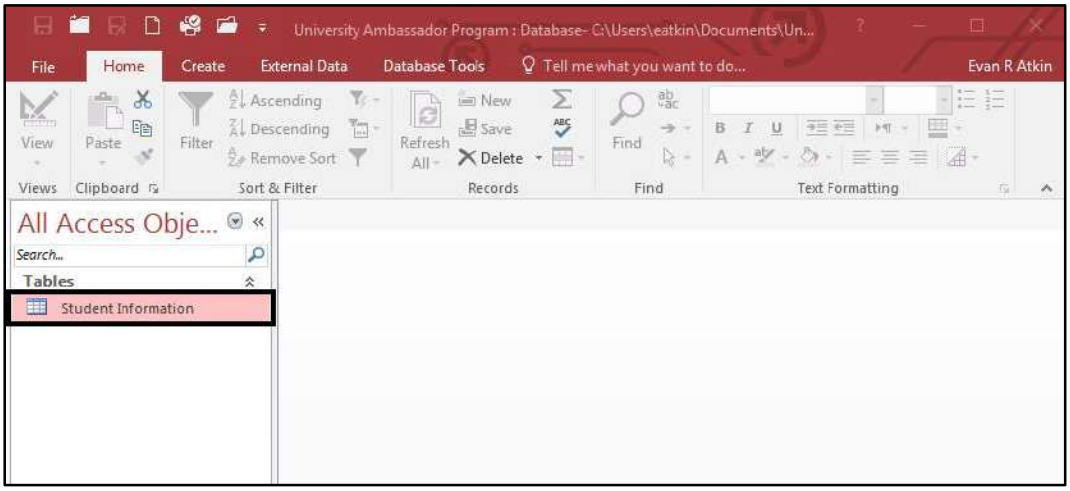


Figure 43 - Re-opening the Table

Entering Data into the Table

Opening a table will display the *Datasheet* view. Once open, you can begin entering date into the table. The following explains how to enter data into your table:

1. Click on the **first blank cell**.

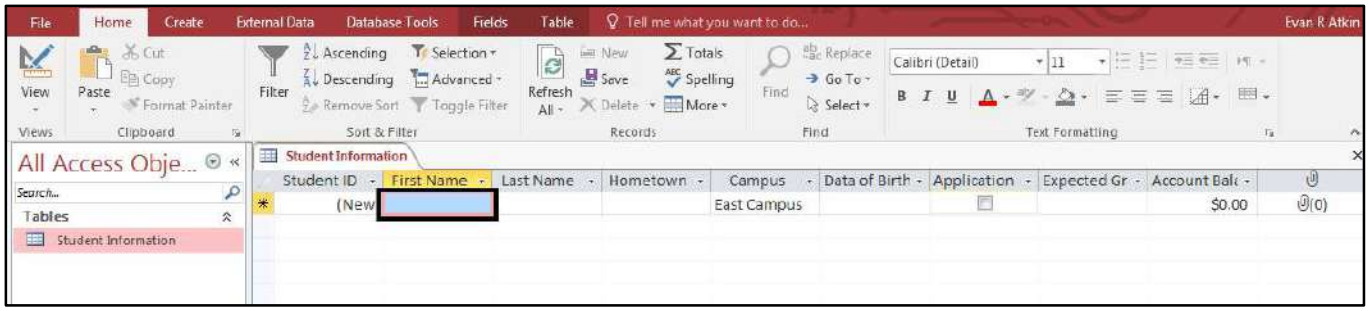


Figure 44 – Select First Blank Cell

2. Begin typing your data into the cell. When finished typing your data into the cell, press the **Tab** key on your keyboard to move right to the next cell.

3. Continue entering data into the cells.

Note: For cells that have *Default Values,* you will see data pre-populate the cell. You may leave the data as is or enter different data as needed.

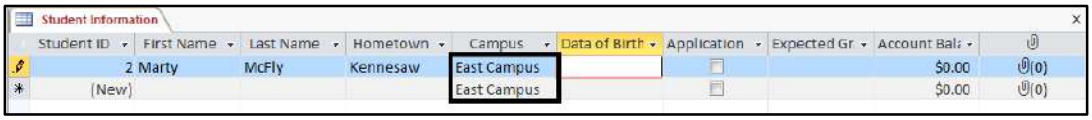


Figure 45 - Default Values

For cells that use a *Lookup Value* data type:

4. Click on the **appropriate cell**. A *dropdown arrow* will appear.

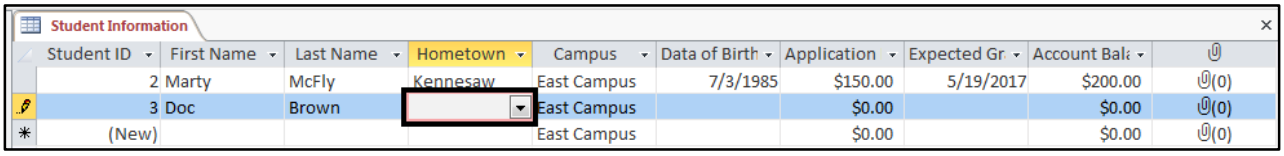


Figure 46- Dropdown Menu

5. Click the **dropdown arrow**.

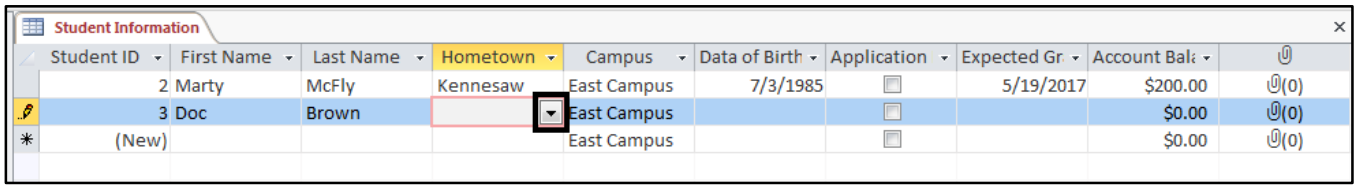


Figure 47 - Click the Dropdown Arrow

6. Select the appropriate **Lookup Value**.

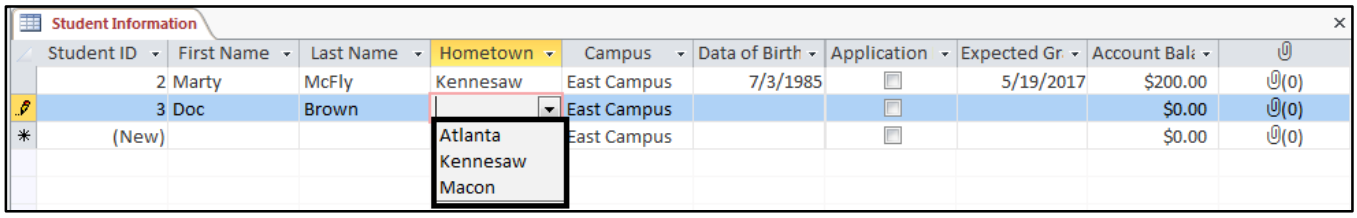


Figure 48 - Select the Lookup Value

For cells that use the *Date/Time* data type:

7. Click on the **appropriate cell**. The *Calendar icon* will appear next to the cell.

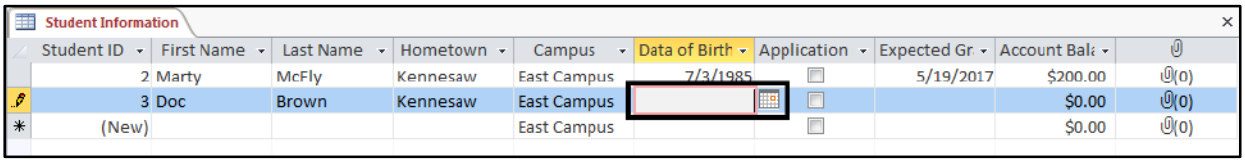


Figure 49 - Calendar Icon

8. Click the **Calendar icon**.

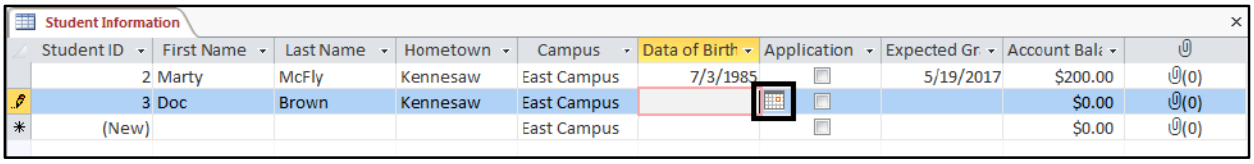


Figure 50 – Accessing the Calendar

9. The *Calendar* will appear. Select the appropriate **date** or manually **type** the date into the cell.

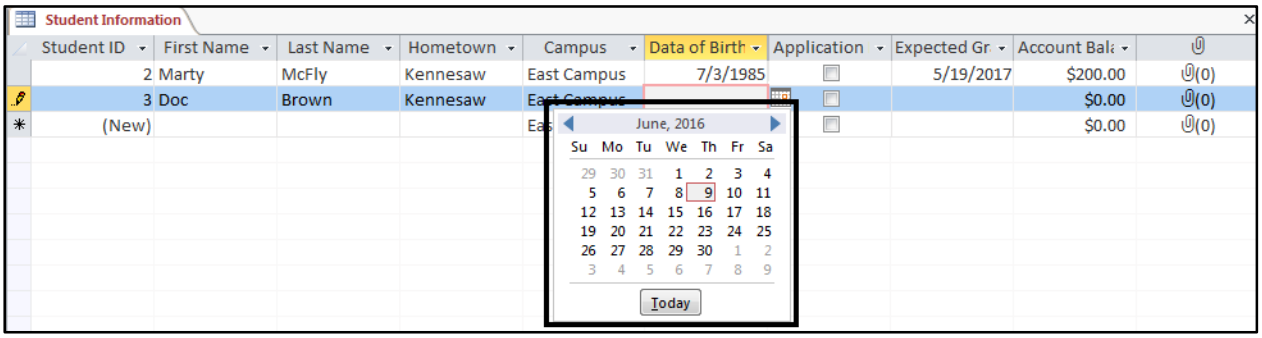


Figure 51 - Select a Date from the Calendar

For cells that use the *Yes/No* data type:

10. Click on the **checkbox** to indicate the *yes/no* value. A checked box indicates a *Yes* value. An un-checked box indicates a *No* value.

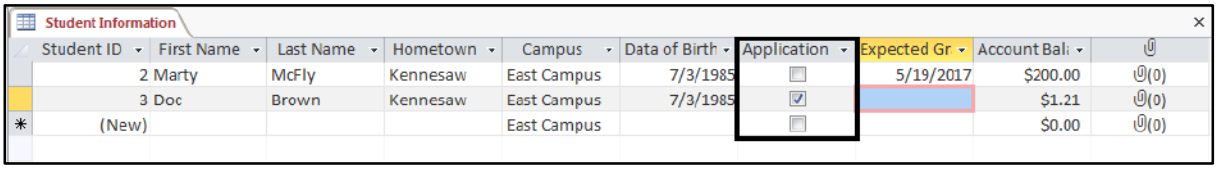


Figure 52 - Yes/No

For cells that use the *Currency* data type:

11. Simply enter the **value**. Your number will automatically be entered as currency.

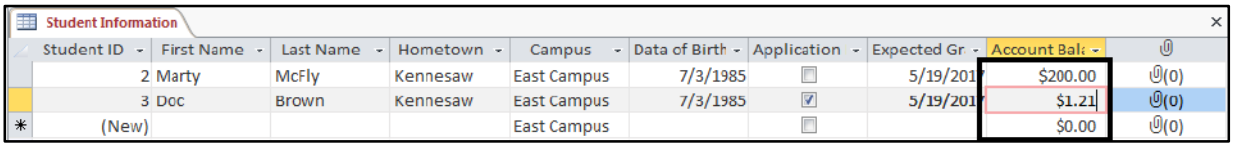


Figure 53 – Currency

Additional Help

For additional support, please contact the KSU Service Desk:

KSU Service Desk for Faculty & Staff

- Phone: 470-578-6999
- Email: service@kennesaw.edu
- Website: http://uits.kennesaw.edu

KSU Student Helpdesk

- Phone: 470-578-3555
- Email: studenthelpdesk@kennesaw.edu
- Website: http://uits.kennesaw.edu