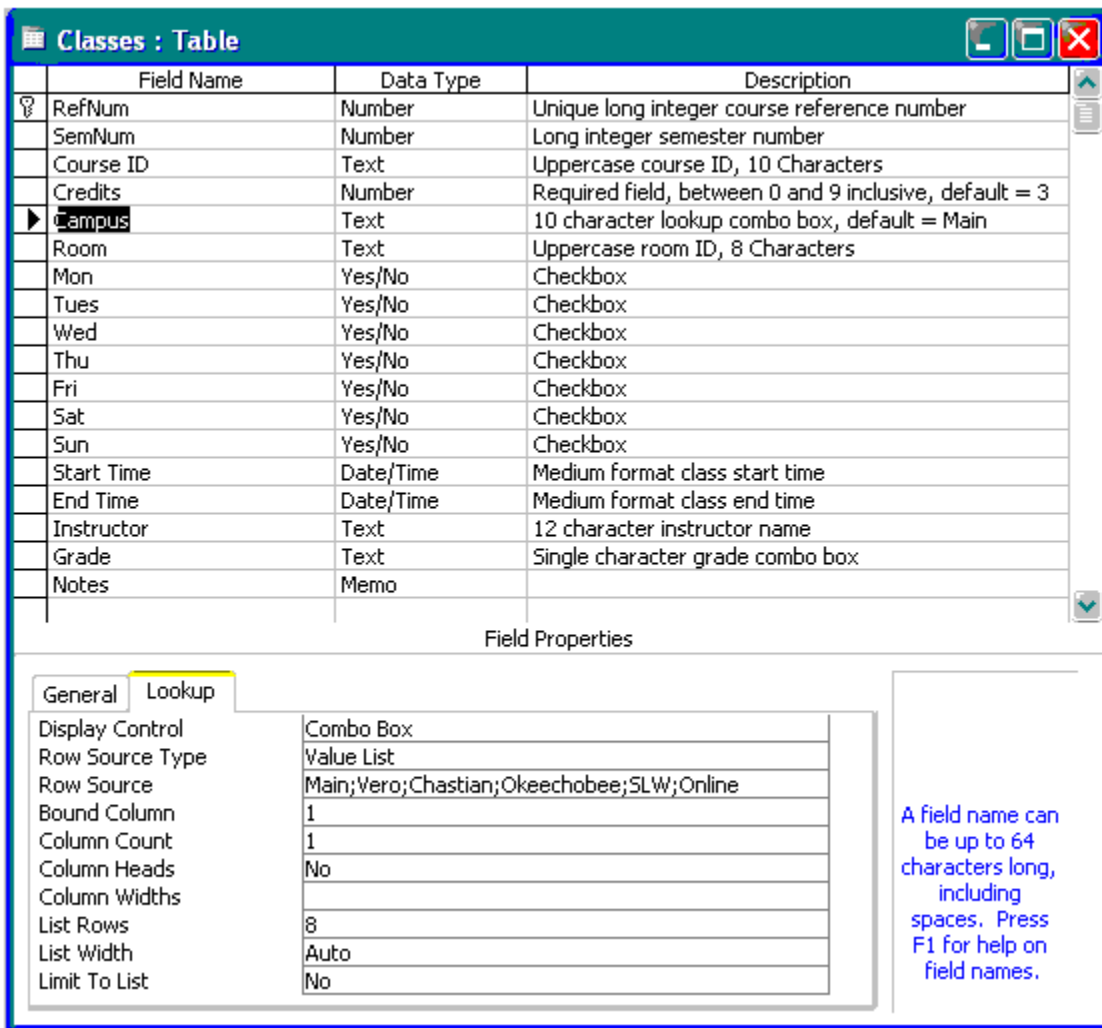


Use Microsoft Access 2010 to create a database file named "**Academics.accdb**" for a student to manage data about classes taken. (Note: The file will appear in your folder as just "Academics" if your Windows Folder Options are set to "Hide extension for known file types".) In this file, you will create one or more of each of the following objects: table, form, query, and report.

### TABLE (DESIGN):

Use the table Design View to create a *table* named "**Classes**" with field properties as described on the following page. **Note: You cannot simply copy the information as you see it in the illustration below into the program. Instead you must use it to properly fill-in the design specifications for the table while using the Design View.**



| Field Name | Data Type | Description  |
|------------|-----------|--|
| RefNum     | Number    | Unique long integer course reference number            |
| SemNum     | Number    | Long integer semester number                           |
| Course ID  | Text      | Uppercase course ID, 10 Characters                     |
| Credits    | Number    | Required field, between 0 and 9 inclusive, default = 3 |
| Campus     | Text      | 10 character lookup combo box, default = Main          |
| Room       | Text      | Uppercase room ID, 8 Characters                        |
| Mon        | Yes/No    | Checkbox   |
| Tues       | Yes/No    | Checkbox   |
| Wed        | Yes/No    | Checkbox   |
| Thu        | Yes/No    | Checkbox   |
| Fri        | Yes/No    | Checkbox   |
| Sat        | Yes/No    | Checkbox   |
| Sun        | Yes/No    | Checkbox   |
| Start Time | Date/Time | Medium format class start time                         |
| End Time   | Date/Time | Medium format class end time                           |
| Instructor | Text      | 12 character instructor name                           |
| Grade      | Text      | Single character grade combo box                       |
| Notes      | Memo      |  |

| Field Properties |  |
|------------------|--|
| General          | Lookup                                   |
| Display Control  | Combo Box                                |
| Row Source Type  | Value List                               |
| Row Source       | Main;Vero;Chastian;Okeechobee;SLW;Online |
| Bound Column     | 1  |
| Column Count     | 1  |
| Column Heads     | No                                       |
| Column Widths    |  |
| List Rows        | 8  |
| List Width       | Auto                                     |
| Limit To List    | No                                       |

A field name can be up to 64 characters long, including spaces. Press F1 for help on field names.

Also note that the RefNum field must be marked as the primary key. The detailed properties of all other fields must conform to the notes in the Description column. Use the notations in the Description column of the illustration to determine the properties that must be defined for each field. Note that the illustration presently shows the detailed selections necessary to define a restricted "Value List" for the Campus field that will appear as a drop-down list box when viewing this field on datasheets and forms. The Grade field must be similarly defined with a list limited to the single characters: A,B,C,D,F,W,I,S, or U

**TABLE (DATA):**

After saving the table design, open the table and enter the following data:

| RefNum | SemNum | Course ID | Credits | Campus   | Room  | Mon                                 | Tues                                | Wed                                 | Thu                                 | Fri                                 | Sat                                 | Sun                                 | Start Time | End Time | Instructor | Grade | Notes         |
|--------|--------|-----------|---------|----------|-------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|----------|------------|-------|---------------|
| 96700  | 20054  | MAT1033   | 3       | Main     | W218  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | 5:30 PM    | 8:00 PM  | Allen      | B     |               |
| 97111  | 20061  | ENC1101   | 3       | SLW      | B102  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | 9:30 AM    | 10:45 AM | Sherry     | C     |               |
| 97330  | 20061  | CIS1000   | 3       | Online   |       | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |            |          | Isenburg   | W     |               |
| 97555  | 20061  | CGS1283   | 3       | Main     | V120  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | 5:30 PM    | 8:00 PM  | Stroth     | B     |               |
| 97777  | 20061  | COP2000   | 3       | Main     | V209A | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | 5:30 PM    | 8:00 PM  | Gibson     | B     |               |
| 97999  | 20061  | CGS1555   | 1       | Vero     | A101  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 6:00 PM    | 10:00 PM | Wilson     | S     | Weekend Class |
| 98000  | 20062  | CGS1700   | 3       | Main     | V120  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | 5:30 PM    | 8:00 PM  | Richwine   | B     |               |
| 98222  | 20062  | CGS1872   | 3       | Chastian | C112  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | 11:00 AM   | 12:15 PM | Nearing    | C     |               |
| 98440  | 20062  | COP1830   | 3       | Online   |       | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |            |          | Gibson     | A     |               |
| 98444  | 20062  | CIS1000   | 3       | Main     | V209A | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | 8:00 AM    | 9:15 AM  | Holly      | C     |               |
| 98666  | 20062  | CET1178   | 3       | Main     | V442  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | 5:30 PM    | 8:00 PM  | Paniyotio  | C     | Session A     |
| 98888  | 20062  | CTS1104   | 3       | Main     | V121  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | 8:00 PM    | 10:30 PM | Waller     | I     |               |
| 99876  | 20064  | CGS2760   | 3       | Main     | V121  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 2:00 PM    | 4:30 PM  | Gibson     | B     |               |

Sort the table above in ascending order based on the Semester ID, using the Course ID to break any ties. (Hint: select both columns first by dragging through the field labels, and then use the Sort Ascending button in the Sort & Filter group under the Home tab on the ribbon.) Adjust the column widths to fit everything on one page by double-clicking on the right edges of the column headings. You might have to reduce some column widths even smaller than the auto-width results to fit the entire datasheet on one sheet of paper. You will certainly have to set the page layout to landscape orientation and set the left and right margins to 0.5 inches each. Use the Print Preview command under the Office Button to be sure that the table will print on one sheet of paper. If necessary, reduce some column widths to accomplish this.

**FORMS:****FIRST FORM:**

Design a columnar *form* named "**Allinfo**" for viewing or entering the data from the "Classes" table that looks similar to the one below.

|           |                                     |            |                          |
|-----------|-------------------------------------|------------|--------------------------|
| RefNum    | 96700                               | Sat        | <input type="checkbox"/> |
| SemNum    | 20054                               | Sun        | <input type="checkbox"/> |
| Course ID | MAT1033                             | Start Time | 5:30 PM                  |
| Credits   | 3                                   | End Time   | 8:00 PM                  |
| Campus    | Main                                | Instructor | Allen                    |
| Room      | W218                                | Grade      | B                        |
| Mon       | <input checked="" type="checkbox"/> | Notes      |                          |
| Tues      | <input type="checkbox"/>            |            |                          |
| Wed       | <input type="checkbox"/>            |            |                          |
| Thu       | <input type="checkbox"/>            |            |                          |
| Fri       | <input type="checkbox"/>            |            |                          |

Record: 1 of 13

You do not need to reproduce the exact locations of the fields as they appear above, but the general layout and the wording of the labels (unbound controls) used on the form must match the illustration. You will have to remove the automatic *stacked* layout that recent versions of Access impose on newly created forms before you will be able to reposition and resize the controls (boxes and labels) on the form. To do this:

1. Start in Design View. By default, all controls should be selected (shown with orange borders). If they are not select them all with Ctrl+A.
2. On the ribbon, select the tab "Arrange" under "Form Design Tools". Then select the "Remove" button in the "Control Layout" group.
3. Click on an unused area of the design grid to deselect all of the controls.
4. Use the *resizing handles* (on the tops and sides of the controls) to adjust their sizes. If you drag the edge of a control, then both parts of it (bound and unbound) will move. You can move either part separately by dragging the small square *move handle* in the upper left-hand corner of each control.

**SECOND FORM:**

Create a second form named "**Basics**" that also accesses the "Classes" table, but limited to only the fields shown below.

**QUERIES:****FIRST QUERY:**

Use a design wizard to define a *simple query* named "**Schedule**" that will list only the fields shown below for records from the Classes table from the 20062 semester on the main campus that started at or later than 5:30 PM. It should be sorted in ascending order by Course ID. The output from the query should appear similar to the example below.

| Schedule |        |           |        |      |            |          |                                     |                          |                                     |                                     |                          |                          |                          |
|----------|--------|-----------|--------|------|------------|----------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| SemNum   | RefNum | Course ID | Campus | Room | Start Time | End Time | Mon                                 | Tues                     | Wed                                 | Thu                                 | Fri                      | Sat                      | Sun                      |
| 20062    | 98666  | CET1178   | Main   | V442 | 5:30 PM    | 8:00 PM  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20062    | 98000  | CGS1700   | Main   | V120 | 5:30 PM    | 8:00 PM  | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20062    | 98888  | CTS1104   | Main   | V121 | 8:00 PM    | 10:30 PM | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**SECOND QUERY:**

Define a separate *query* named "**Grades**" that will list only the fields shown below for records from the Classes table for 3 credit classes that ran after semester 20054 in which the student earned either an "A" or "B" grade. It should be sorted in ascending order by Reference Number. The output from the query should appear similar to the example below.

| Grades |        |           |         |            |       |
|--------|--------|-----------|---------|------------|-------|
| SemNum | RefNum | Course ID | Credits | Instructor | Grade |
| 20061  | 97555  | CGS1283   | 3       | Stroth     | B     |
| 20061  | 97777  | COP2000   | 3       | Gibson     | B     |
| 20062  | 98000  | CGS1700   | 3       | Richwine   | B     |
| 20062  | 98440  | COP1830   | 3       | Gibson     | A     |
| 20064  | 99876  | CGS2760   | 3       | Gibson     | B     |

**REPORT:**

Define a report named "**Academic History**" based on the **Classes** table with only the fields shown in the illustration on the following page. Your report output should resemble it. You will find the report easiest to produce using the report wizard, but you will still have to use the Design View afterwards for some finishing touches.

**START WITH REPORT WIZARD:**

Use the *Report Wizard* to:

- Select the fields (columns) to include in the order shown on the next page. Be sure to include the SemNum field as the first one to accommodate the grouping required in the next item.
- Group the rows of output by Semester Number.
- Set the *sorting order* to be based on the Course ID field.
- Set the *layout* to “Outline” and the *orientation* should to "Portrait".
- Select report *style* named "None". The column labels should match the illustration.
- Name the report “Academic History”.

**MODIFY REPORT DESIGN:**

After using the wizard to define the initial report design, you will have to modify the design to conform to the following additional requirements:

- Adjust the widths of the columns to appear spaced roughly evenly as shown below.
- Include a *label control* that contains your name just under the report title in the report header. (This must be done in Design View.)
- The grouping header based on the SemNum field should be altered so that the unbound control reads "Semester:" rather than "SemNum"; and the position and width of the bound SemNum control should be adjusted so that it is immediately following the unbound label.
- Include *line* controls above and below the column headers and above the page footer. (This must be done in Design View.)

Note: While in the Design View, you can drag the edges of the design areas to expand or shrink them to allow easier manipulation. Be aware that these palettes will be rendered in the last size you set them.

Use *Print Preview* to check that the report output aligns properly before printing it. Use the Design View to make adjustments. Report output should resemble the output on the next page, but be in "Portrait" orientation.

See illustration on next page.

**SUBMISSION:**

[Login](#) to the IRSC Online (Angel) Server and use the “Access 2010 Project” drop box under the “Lessons” tab to attach your database file “academics.accdb” as described on the step-by-step directions at:

[http:// www.gibsonr.com/classes/howto/onlinesubm.html](http://www.gibsonr.com/classes/howto/onlinesubm.html)

**NOTICE:** Access files can often grow to be far larger than necessary if you delete things during the making of your database. Access leaves deleted objects hidden in a file unless you take an extra step to remove them. To do this, open your finished database and click the File tab, then select Info, and finally Compact & Repair Database. This should purge deleted content from your file and reduce its size before you submit it. *Be sure that you have closed your database and exited Access before copying the file with Windows.*

# Academic History

for Joe Student

**Semester:** 20054

| Course ID | Ref. # | Credits | Campus | Room | Instructor | Grade |
|-----------|--------|---------|--------|------|------------|-------|
| MAT1033   | 96700  | 3       | Main   | W218 | Allen      | B     |

**Semester:** 20061

| Course ID | Ref. # | Credits | Campus | Room | Instructor | Grade |
|-----------|--------|---------|--------|------|------------|-------|
| CGS1283   | 97555  | 3       | Main   | V120 | Stroth     | B     |
| CGS1555   | 97999  | 1       | Vero   | A101 | Wilson     | S     |
| CIS1000   | 97330  | 3       | Online |      | Isenburg   | W     |
| COP2000   | 97777  | 3       | Main   | V209 | Gibson     | B     |
| ENC1101   | 97111  | 3       | SLW    | B102 | Sherry     | C     |

**Semester:** 20062

| Course ID | Ref. # | Credits | Campus   | Room | Instructor | Grade |
|-----------|--------|---------|----------|------|------------|-------|
| CET1178   | 98666  | 3       | Main     | V442 | Paniyotio  | C     |
| CGS1700   | 98000  | 3       | Main     | V120 | Richwine   | B     |
| CGS1872   | 98222  | 3       | Chastian | C112 | Nearing    | C     |
| CIS1000   | 98444  | 3       | Main     | V209 | Holly      | C     |
| COP1830   | 98440  | 3       | Online   |      | Gibson     | A     |
| CTS1104   | 98888  | 3       | Main     | V121 | Waller     | I     |

**Semester:** 20064

| Course ID | Ref. # | Credits | Campus | Room | Instructor | Grade |
|-----------|--------|---------|--------|------|------------|-------|
| CGS2760   | 99876  | 3       | Main   | V121 | Gibson     | B     |