

AutoCAD® Self-paced Learning Modules  
**AutoCAD 2D Advanced**  
Module 24  
**Fields**

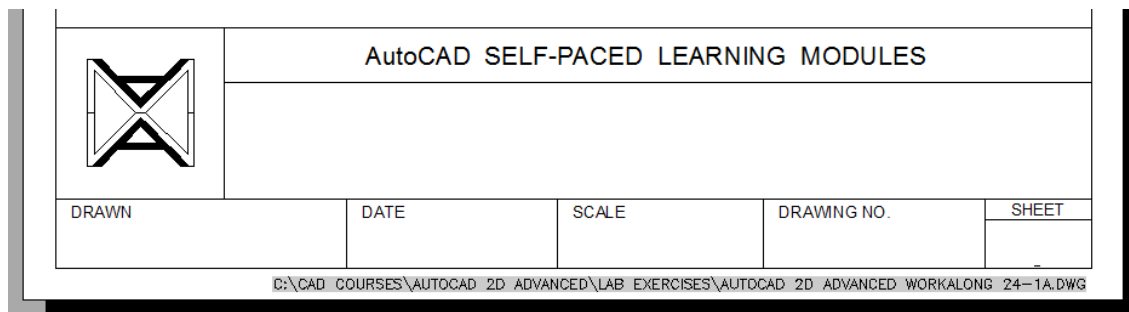
### Learning Outcomes:

When you have completed this module, you will be able to:

1. Describe drawing properties and explain how they are used in an AutoCAD drawing.
2. Describe fields and explain how they are used in an AutoCAD drawing.
3. Create and edit fields in a drawing.

### Fields

A **field** is updatable text that displays data that is defined by the assigned field. Field data is used because it may change in the future. For example, a field for the drawing's name and the folder location of where the file is located on the hard drive. If you place the field on the drawing, it will display the drawing's name and its filed location. If the drawing name or file location is changed in the future, the field text will instantly display the changes.



**Figure 24-1**  
Fields

Fields can be inserted in any text on the drawing, except tolerances. The text can be in such things as single line text, multiline text, table cells, attributes, and attribute definitions.

When any text command is active, either in insert mode or in edit mode, right click the mouse and a field can be inserted.

A field for which no value is assigned displays hyphens "----". An invalid field displays pound signs "#####".

The field text uses the same text style as the text object in which it is inserted. Formatting options in the Field dialog box control the appearance of the text that is displayed. The options that are available depend on the type of field. A field can be converted back to a text object by changing the contents property.

There is more information available on fields in AutoCAD's Help files.

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## Creating and Editing Fields Using Text on the Drawing

**Step 1** Start a new drawing using the template Template 2D Advanced English.dwt. Check the current profile and if required, set it to AutoCAD 2D Advanced.

**Step 2** Save the drawing with the name AutoCAD 2D Advanced Workalong 24-1.

**Step 3** Click Drawing Properties in the File pull-down menu to open the Drawing Properties dialogue box. (Figure Step 3A and 3B)

**Author's Comments:** It is important that the current profile is set to AutoCAD 2D Advanced before you continue with this workalong.

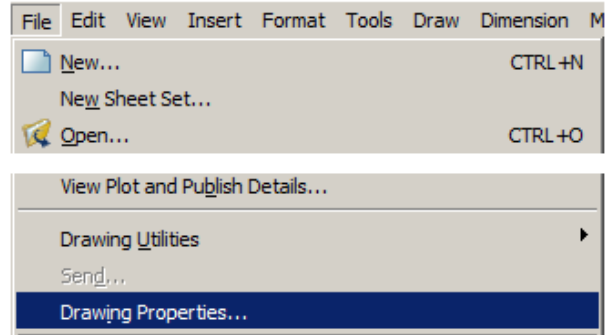


Figure Step 3A

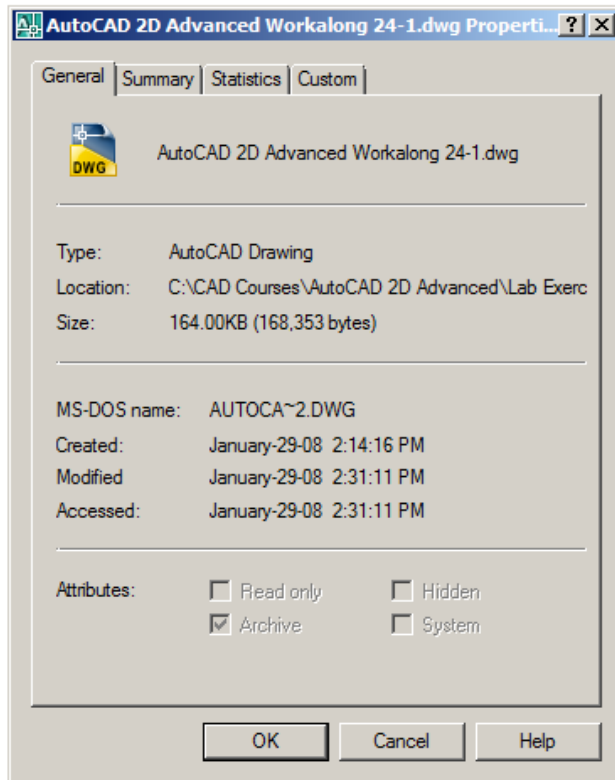


Figure Step 3B

**Step 4** Enable the Summary tab and fill in the boxes as shown in the figure. Use your name for the Author. (Figure Step 4)

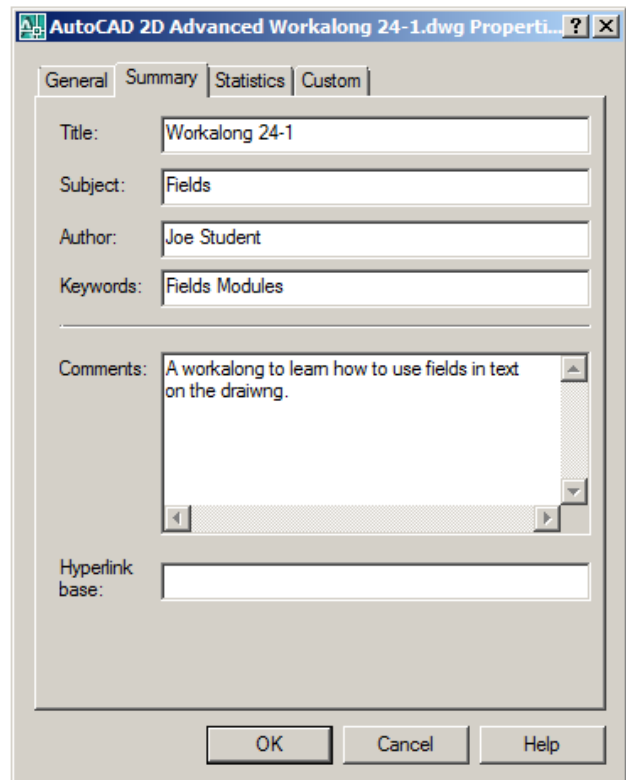


Figure Step 4

**Step 5** Enable the Statistics tab and review its contents. Click OK to close the dialogue box. (Figure Step 5)

**Author's Comments:** The data on your Statistics tab will be different then the figure.

**Step 6** Open the Options dialogue box and enable the User Preferences tab. (Figure Step 6)

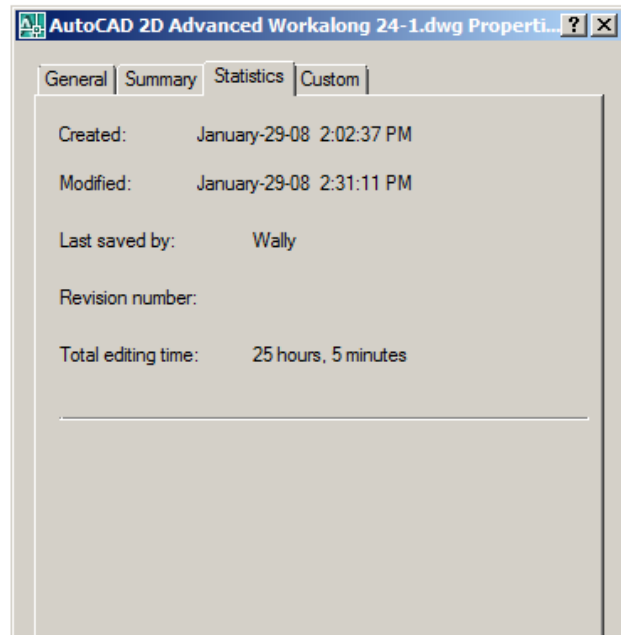


Figure Step 5

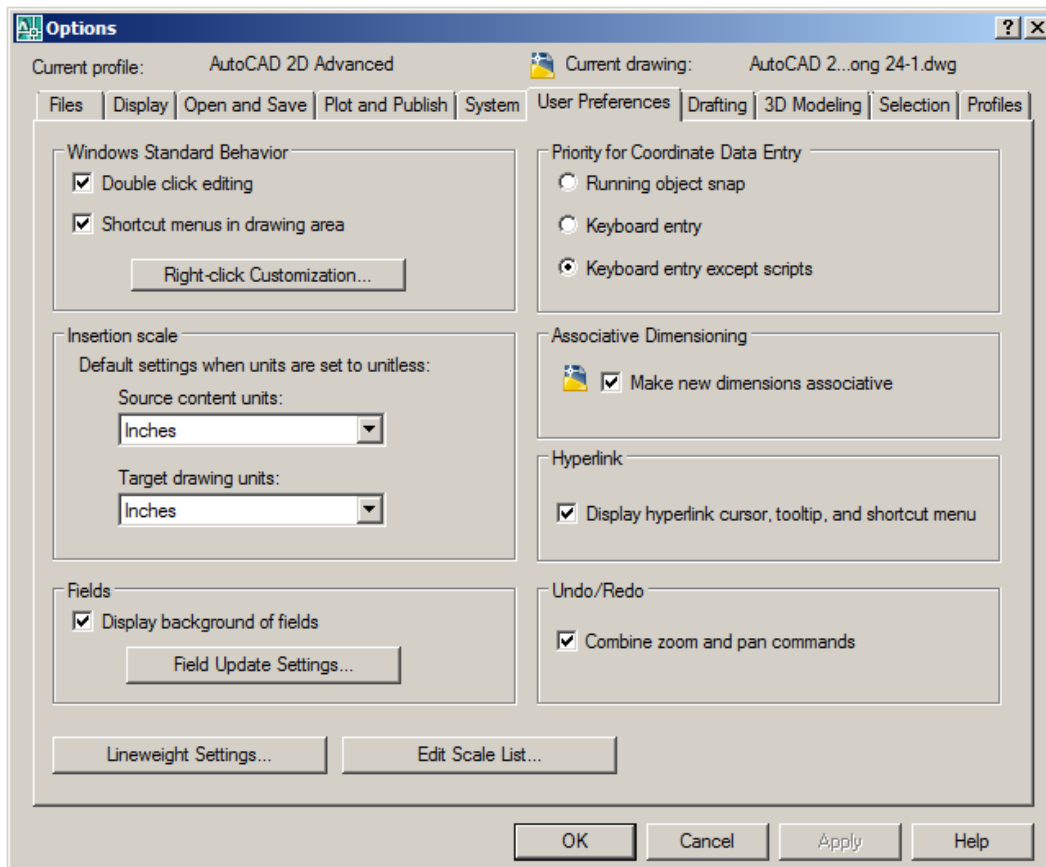
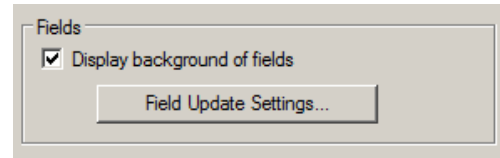
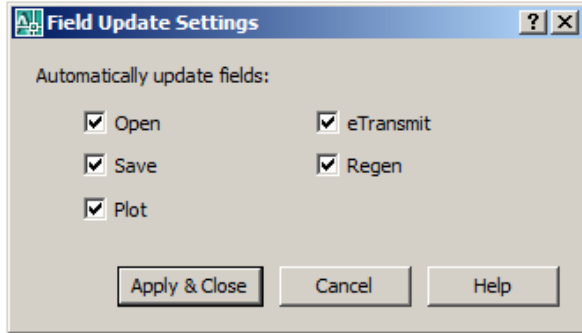


Figure Step 6

**Step 7** In the Fields area, enable Display background of fields. Click the Field Update Settings button and set the Field Update Settings dialogue box as shown in the figure. (Figure Step 7A and 7B)



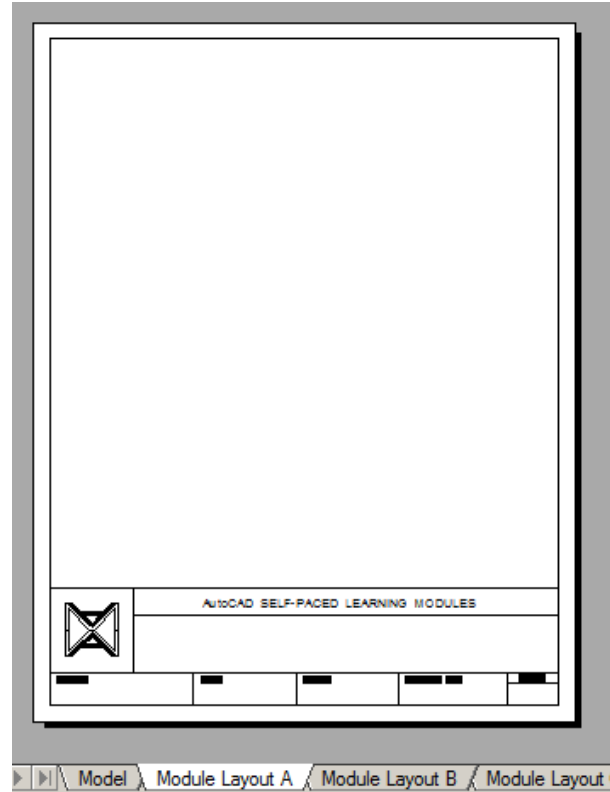
**Figure Step 7A**



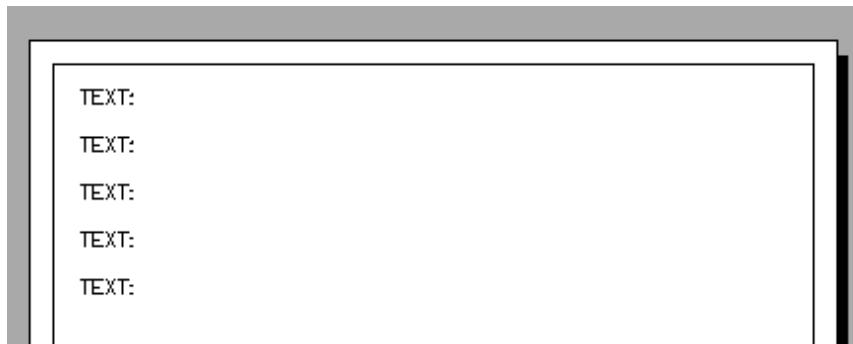
**Figure Step 7B**

**Author's Comments:** The system variable `FIELDDEVAL` can also be used to set the variables in the Field Update Settings dialogue box.

**Step 8** Enable Module Layout A layout. (Figure Step 8)



**Figure Step 8**



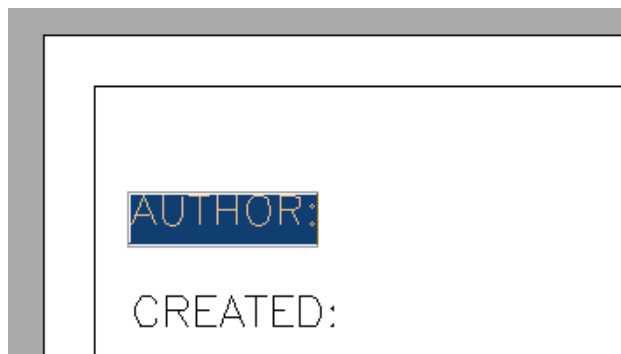
**Figure Step 9**

**Step 9** Insert one single line text string `TEXT` using the text height of 0.125. Locate it by eye near the top. Array it to create 5 at a row spacing of 0.5. (Figure Step 9)

**Step 10** Edit the five text strings to match the figure. (Figure Step 10)

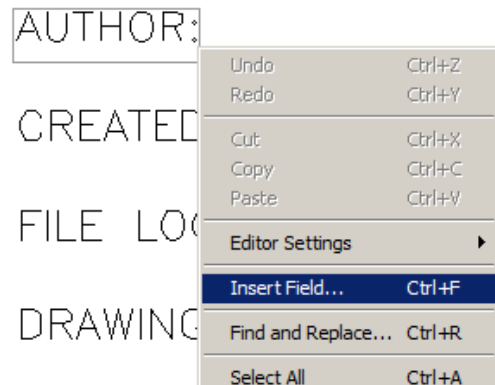


**Figure Step 10**

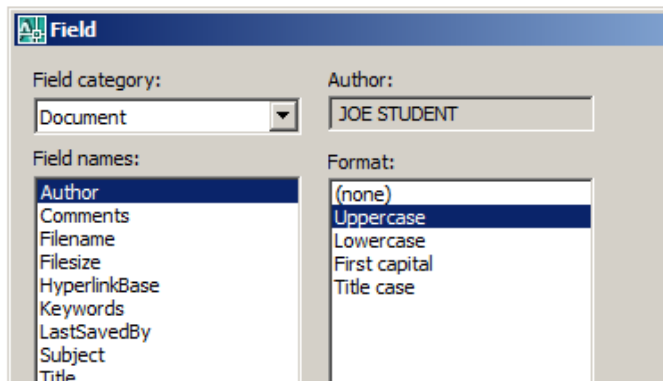


**Figure Step 11A**

**Step 11** Double click the text object AUTHOR to go into edit mode. While in edit mode, click to unblock the text and move the cursor to the end of the string and right click the mouse. In the right-click menu, click Insert Field. (Figure Step 11 A and 11B)



**Figure Step 11B**

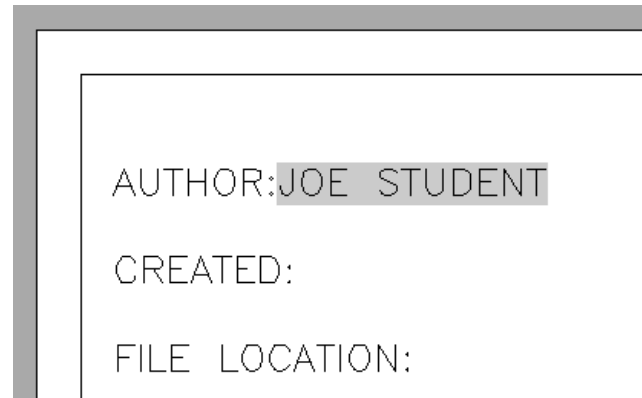


**Figure Step 12A**

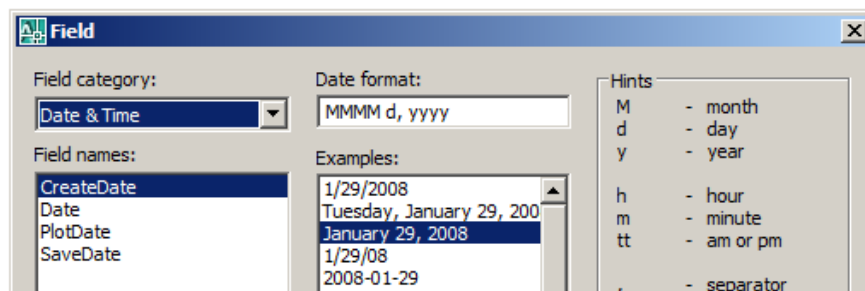
**Step 12** Step 11 will open the Field dialogue box. Set the Field category to Document and select Author for the field name. In the Format box, select Uppercase. Click OK to close the box. (Figure Step 12A and 12B)

**Author's Comments:** Fields will display with a background since we set that in Step 7. The background will not print and it can be disabled, if required.

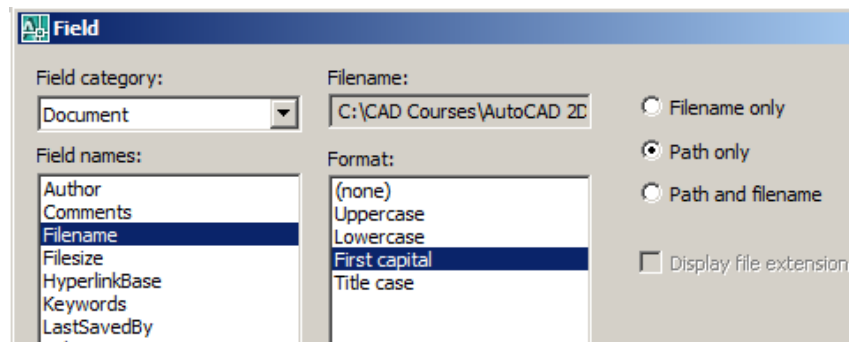
**Step 13** Repeat the same for the next four text strings using different fields and settings as shown in the figure. (Figure Step 13A, 13B, 13C and 13D)



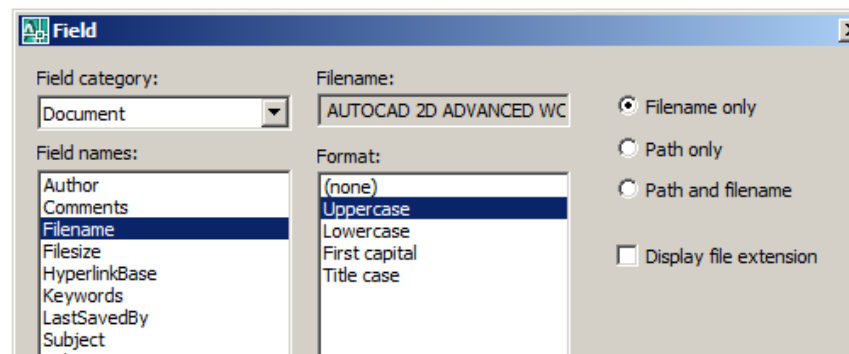
**Figure Step 12B**



**Figure Step 13A**



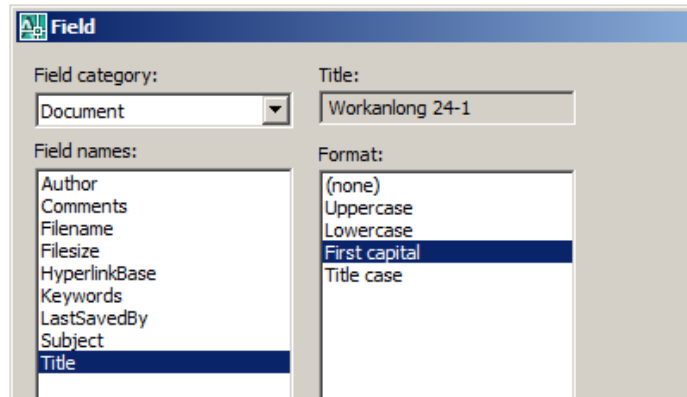
**Figure Step 13B**



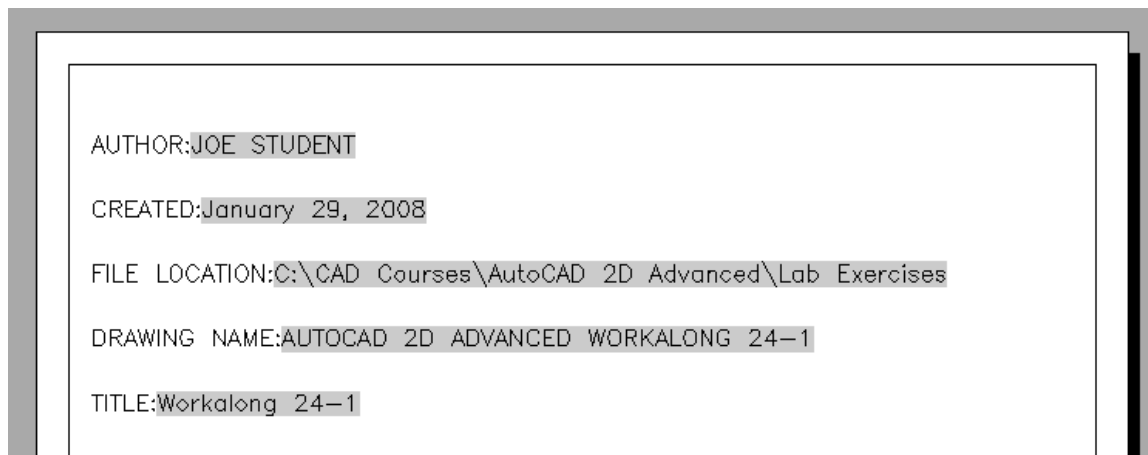
**Figure Step 13C**

**Step 14** Your drawing should match the figure except for the AUTHOR and CREATED date. (Figure Step 14)

**Step 15** Save the drawing but do not close it.

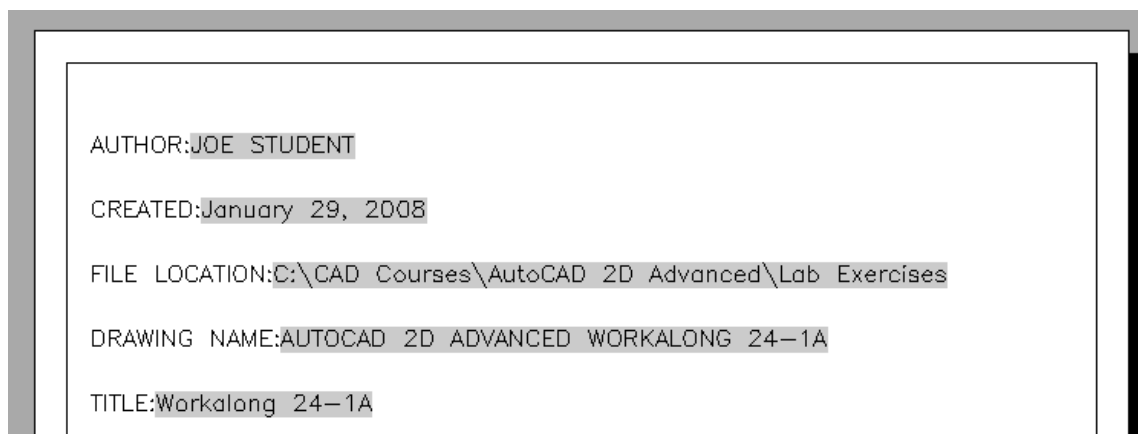


**Figure Step 13D**



**Figure Step 14**

**Step 16** Using the SAVEAS command, save the drawing with the name AutoCAD 2D Advanced Workalong 24-1A. Open the Drawing Properties dialogue box and change the Title to Workalong 24-1A. Enter the REGEN command and your drawing will change to reflect the change. Save and close the drawing. (Figure Step 16)




**Figure Step 16**

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## Using Fields in Blocks

**Step 1** Open drawing AutoCAD 2D Advanced Workalong 24-1A that you created in the first workalong. Save it with the name AutoCAD 2D Advanced Workalong 24-2. Enable layout Module Layout A. It should appear as shown in the figure. (Figure Step 1)

AUTHOR:JOE STUDENT				
CREATED:January 30, 2008				
FILE LOCATION:C:\CAD Courses\AutoCAD 2D Advanced\Lab Exercises				
DRAWING NAME:AUTOCAD 2D ADVANCED WORKALONG 24-2				
TITLE:Workalong 24-1A				
AutoCAD SELF-PACED LEARNING MODULES				
				
DRAWN	DATE	SCALE	DRAWING NO.	SHEET

**Figure Step 1**

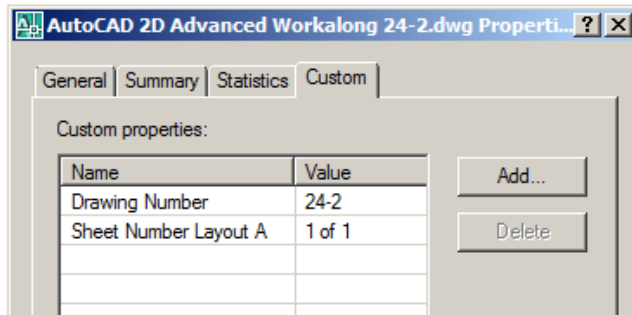
### AutoCAD Command: **FIELD**

The FIELD command is used insert a field into a drawing.

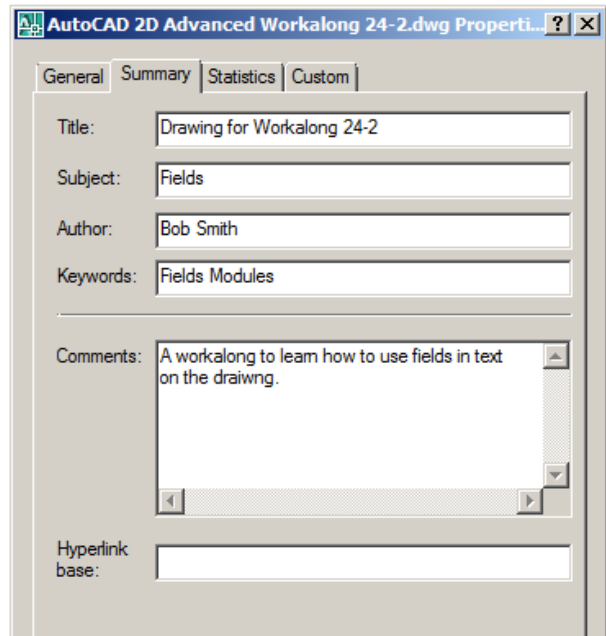
Shortcut: none

**Step 2** Change the drawing properties in the Summary tab to match the figure. (Figure Step 2)

**Step 3** Enable the Custom tab. Add the names and values of custom properties to match the figure. (Figure Step 3)

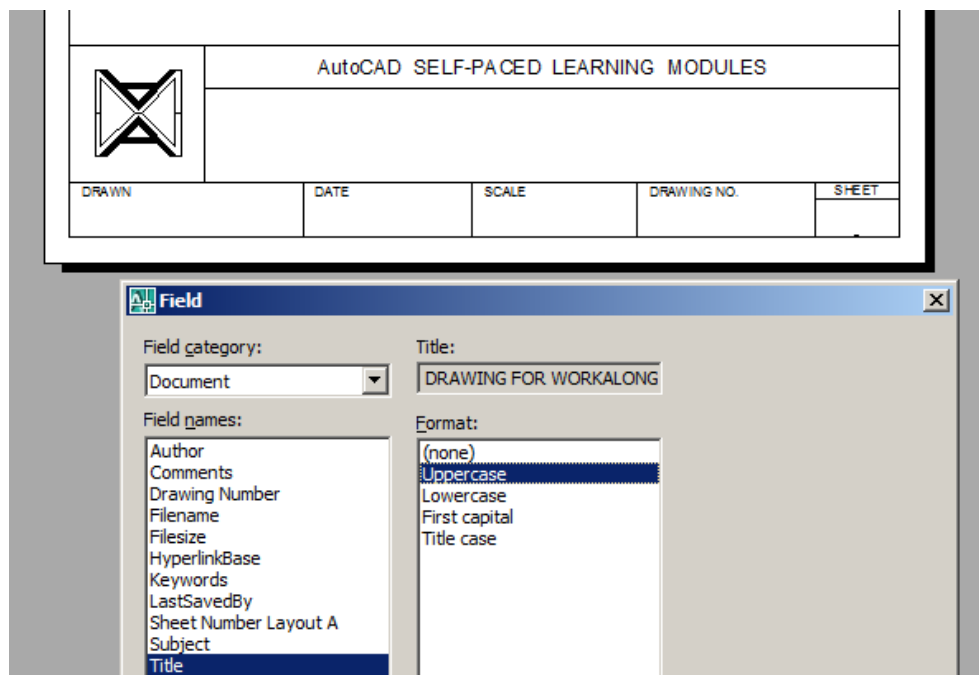


**Figure Step 3**



**Figure Step 2**

**Step 4** Using what you learned in the last workalong, enter the FIELD command to open the Field dialogue box. Fill in the titleblock with appropriate fields. (Figure Step 4A and 4B)



**Figure Step 4A**

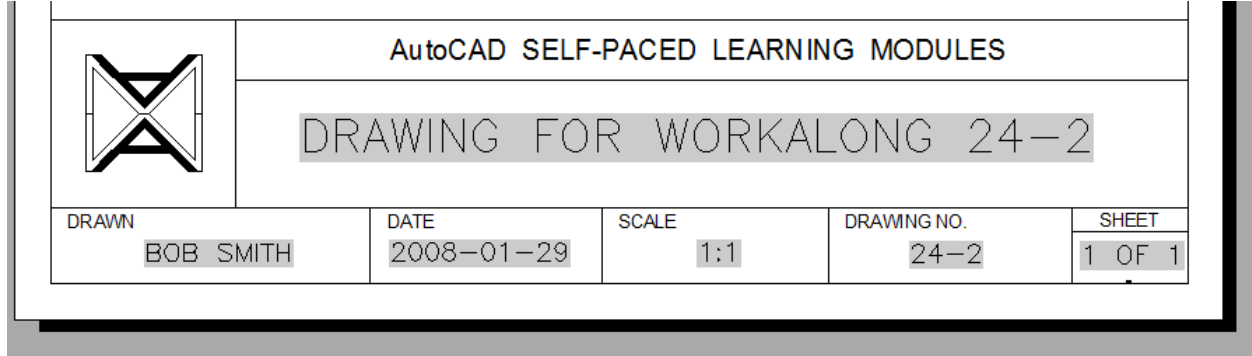


Figure Step 4B

**Step 5** After the field text is inserted into the titleblock, use the Properties window and set the text height and the text justification. Set the text justification to Middle Center.

**Step 6** Enter the BLOCK command and fill in the Block Definition dialogue box as shown in the figure. Name the block Titleblock Text. Select only the field text as the objects for the block. Select the bottom left corner of the titleblock as the Base point. (Figure Step 6)

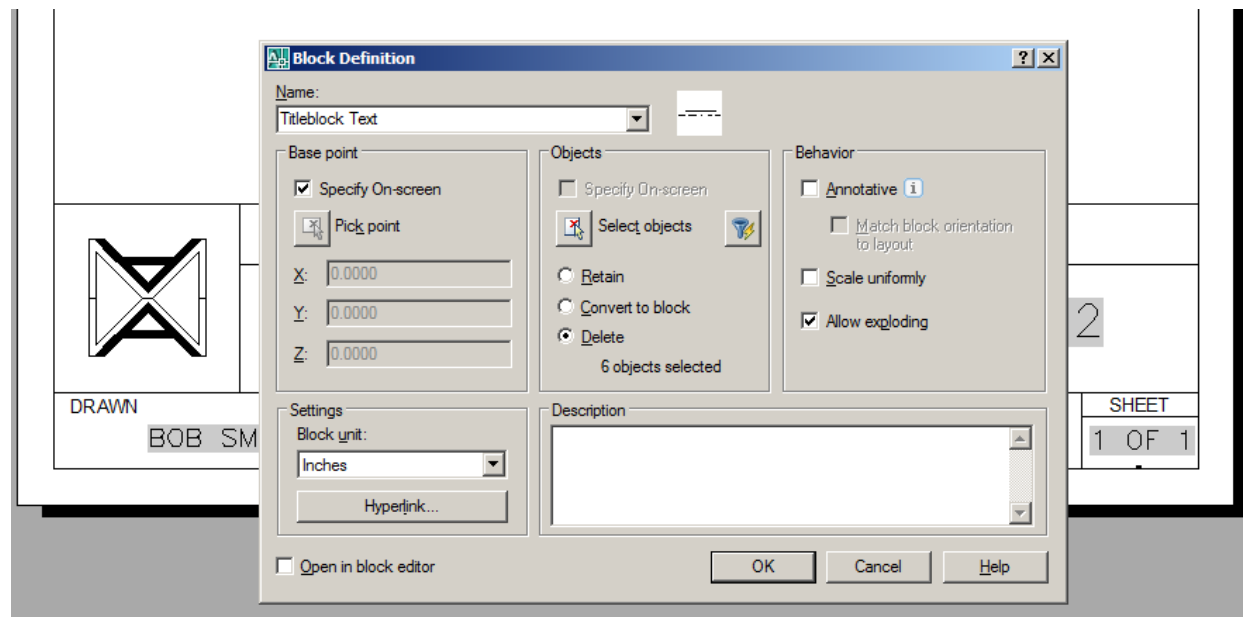


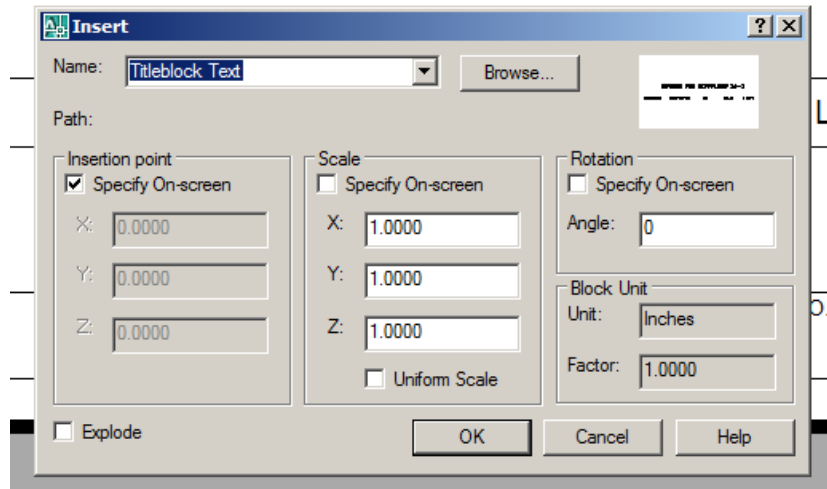
Figure Step 6

### AutoCAD System Variable: **FIELDDISPLAY**

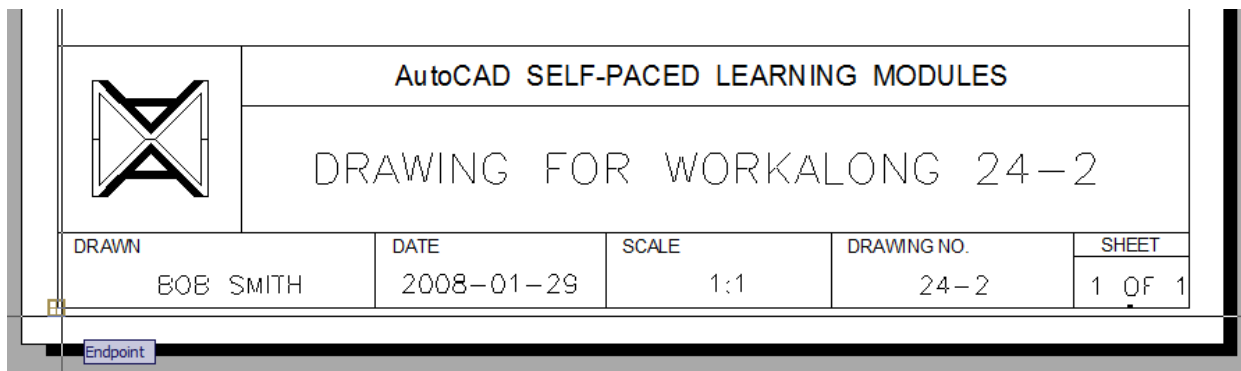
The FIELDDISPLAY system variable controls whether fields are displayed with a gray background.

- 0 - Fields are displayed with no background
- 1 - Fields are displayed with a gray background

**Step 7** Insert the block you just created into the blank titleblock using the bottom left corner as the Insertion point. (Figure Step 7A and 7B)

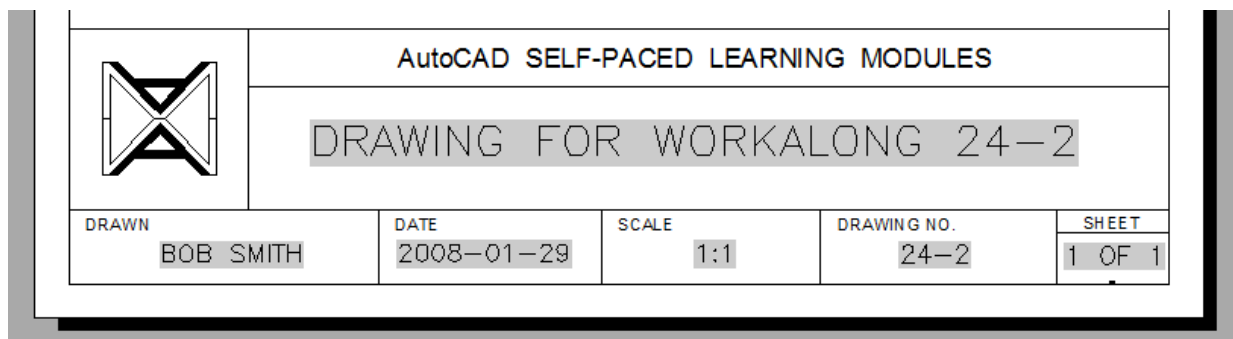


**Figure Step 7A**



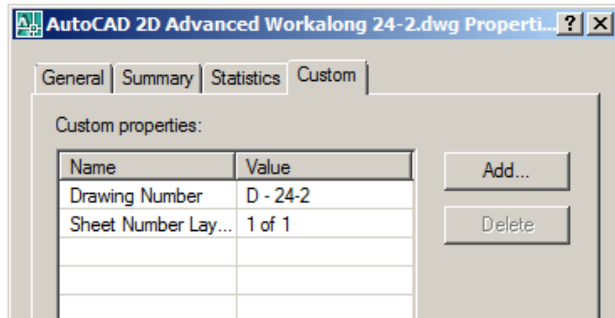
**Figure Step 7B**

**Step 8** The titleblock text block should appear as shown in the figure. (Figure Step 8)

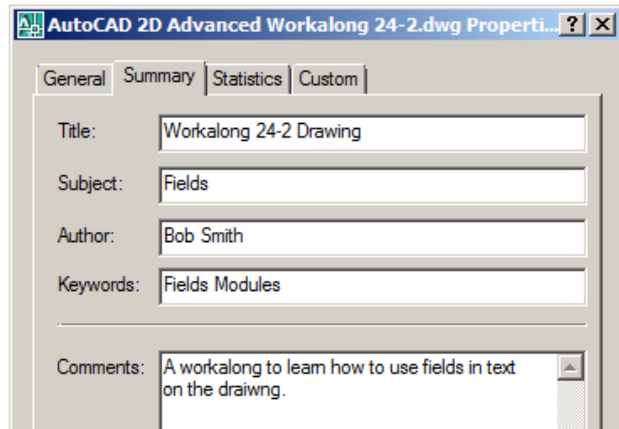


**Figure Step 8**

**Step 9** Using the Drawing Properties dialogue box, edit the properties to match the figures. (Figure Step 9A and 9B).

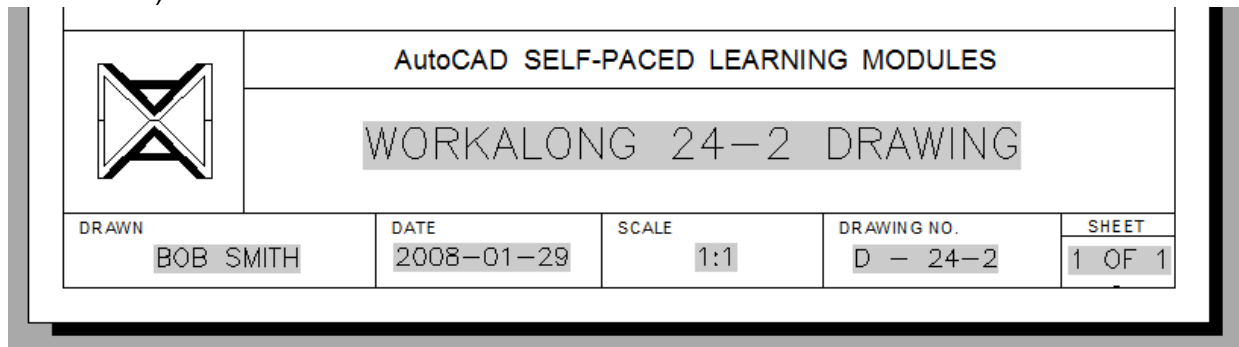


**Figure Step 9B**



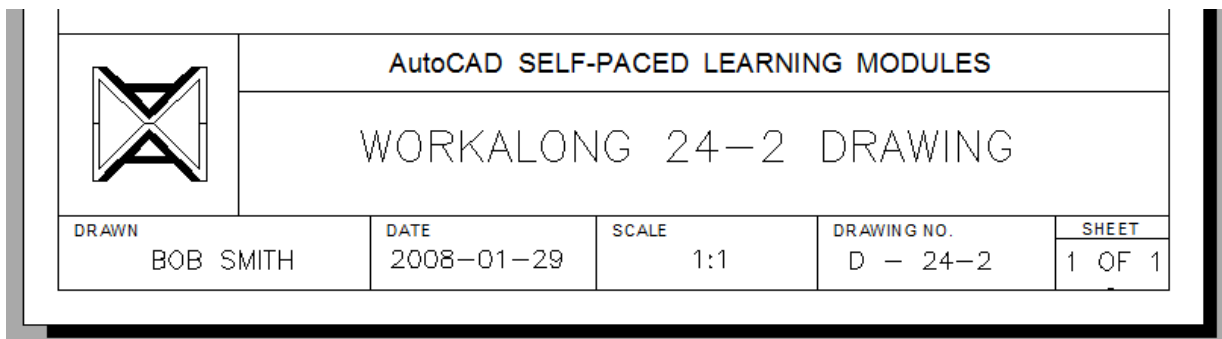
**Figure Step 9A**

**Step 10** Regen the drawing and the titleblock should display as shown in the figure. (Figure Step 10)



**Figure Step 10**

**Step 11** Using the FIELDDISPLAY system variable set it so that the fields are displayed without the grayed background. (Figure Step 11)



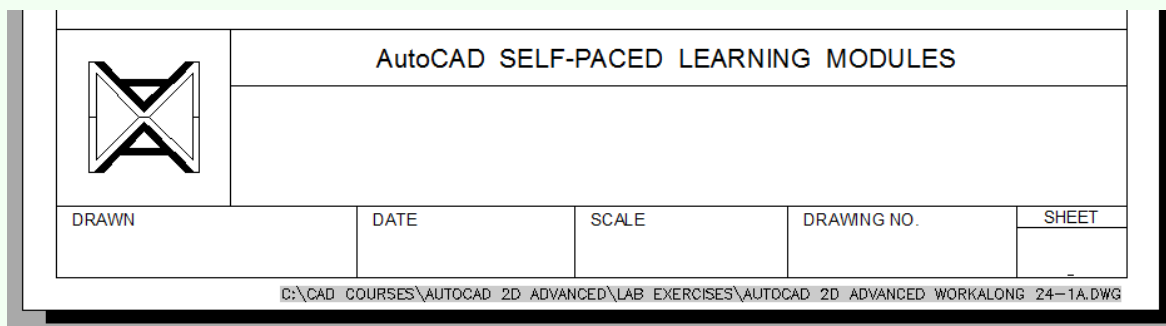
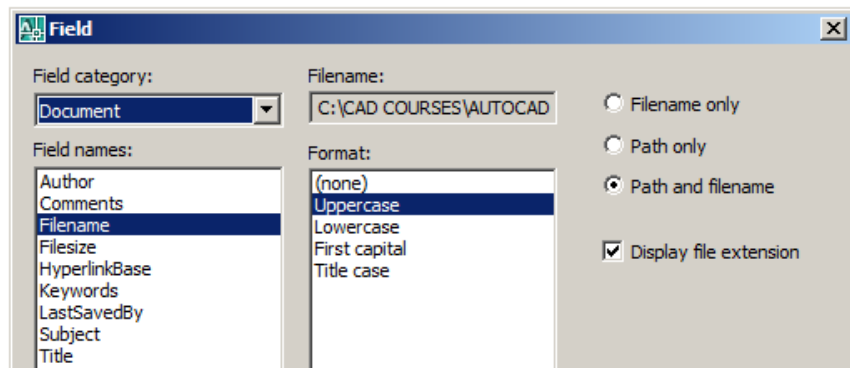
**Figure Step 11**

**Step 12** Save and close the drawing.

**USER TIP**

Insert the Filename field as shown in the figure

below the titleblock. It will display the location that the drawing file is located and the drawing name. This is handy when you have a paper copy of the drawing and need to find and open it in AutoCAD.

**AutoCAD Command: UPDATEFIELD**

The UPDATEFIELD command is used to manually updates fields in selected objects in the drawing.

Shortcut: None

**AutoCAD System Variable: FIELDEVAL**

Controls how fields are updated. The setting is stored as a bitcode using the sum of the following values:

0 Not updated    1 Updated on open    2 Updated on save    4 Updated on plot  
8 Updated on use of ETRANSMIT    16 Updated on regeneration

**The Key Principles in Module 24**

1. A field is updatable text that displays data that is defined by the assigned field.
2. Fields can be inserted in any text on the drawing, except tolerances. The text can be in such things as table cells, attributes, and attribute definitions.
3. A Field for which no value is assigned displays hyphens "----". An invalid field displays pound signs "####".

**Lab Exercise 24-1****Time Allowed: 60 Min.**

Name	Template
AutoCAD 2D Advanced Lab 24-1	Template 2D Advance English.dwt

**Instructions:**

- STEP 1** Start a new drawing and name it as shown above.
- STEP 2** Ensure that the current profile is set to AutoCAD 2D Advanced.
- STEP 3** In Module Layout B, insert the text as in Figure Step 3A and 3B. Select your own text location, height, and font.
- STEP 4** Beside each text string insert the appropriate system variable field.  
Hint: You may have to find the appropriate system variable using AutoCAD's Help file.

Size of the Aperture Box in Pixels: 6

Size of the Pickbox Box in Pixels: 6

Scale Factor of Mouse Wheel: 20

Current Workspace: AutoCAD Classic

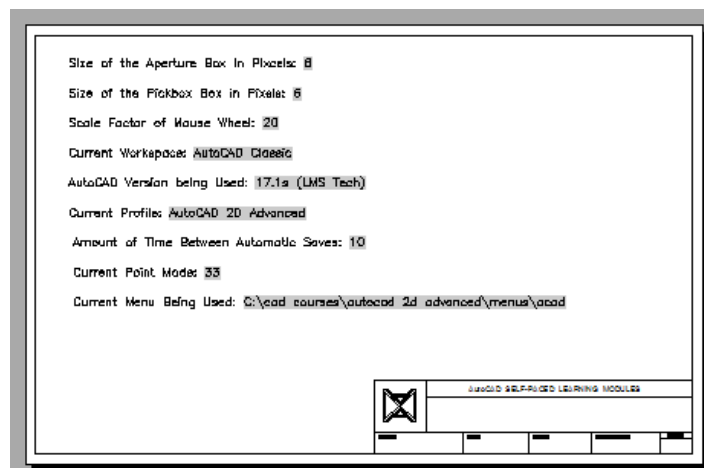
AutoCAD Version being Used: 17.1s (LMS Tech)

Current Profile: AutoCAD 2D Advanced

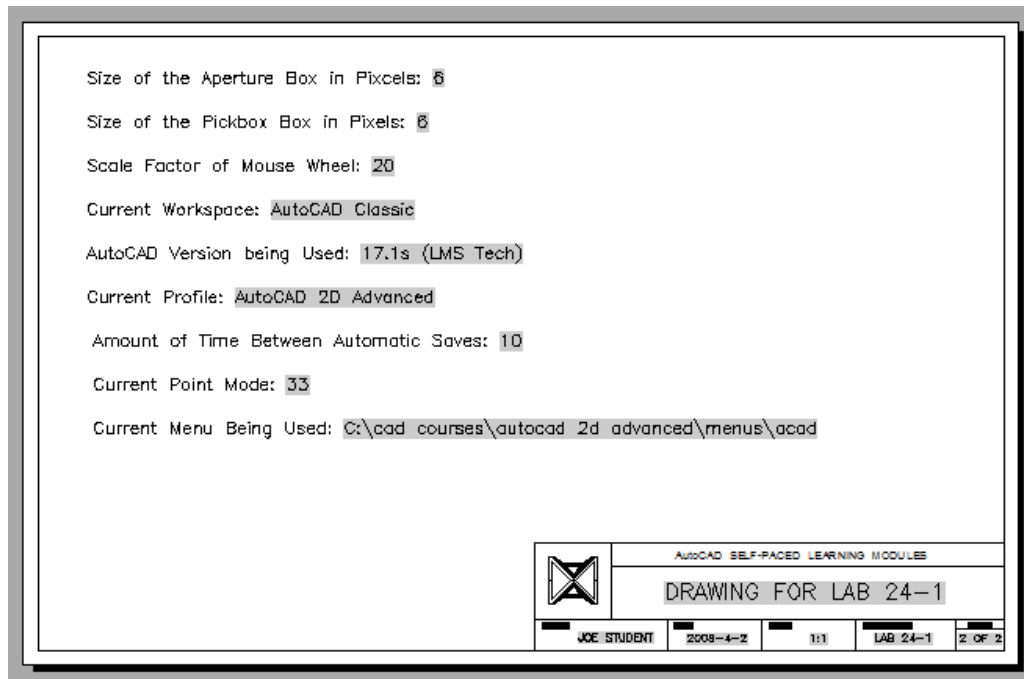
Amount of Time Between Automatic Saves: 10

Current Point Mode: 33

Current Menu Being Used: C:\cad courses\autocad 2d advanced\menus\acad

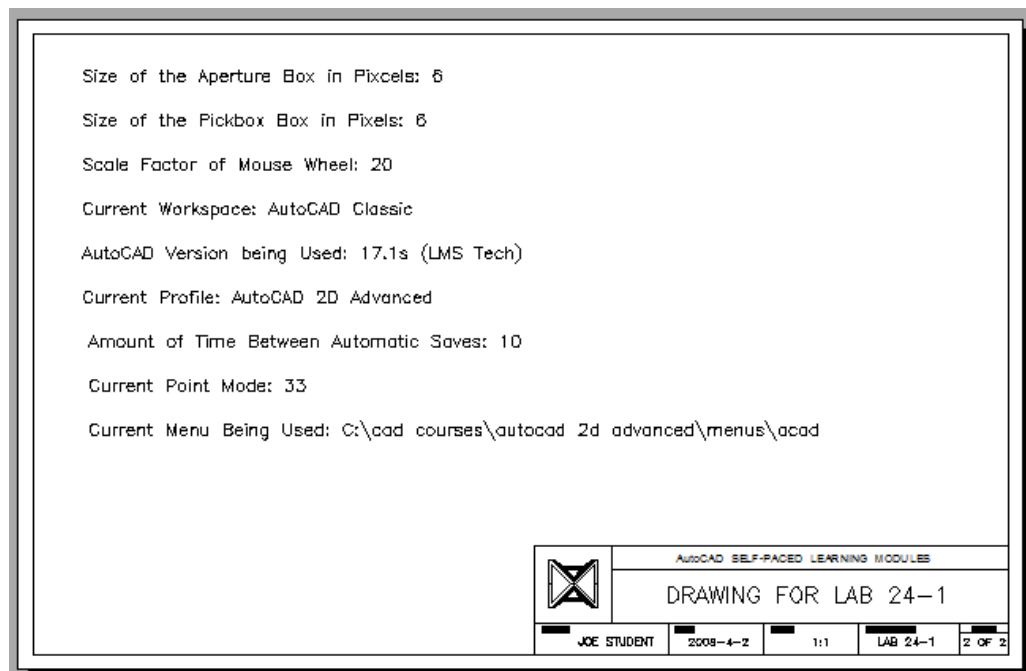
**Figure Step 3A****Figure Step 3B**

**STEP 5** Make the necessary additions to the drawing's properties and insert the block `Titleblock Text` that you created in `Workalong 24-2`. Hint: Use `DesignCenter` to copy the block between the drawings. (Figure Step 5)



**Figure Step 5**

**STEP 6** Remove the field's grayed background. (Figure Step 6)



**Figure Step 6**