

# AutoCAD 2011: One Step at a Time

## Lesson 22: Advanced Blocks

<b>11R22</b>	<b>Exercises</b>
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We're going to recreate the project we did in Lesson 21, but this time our blocks will contain attributes that we'll use to create a bill of materials for our drawing.

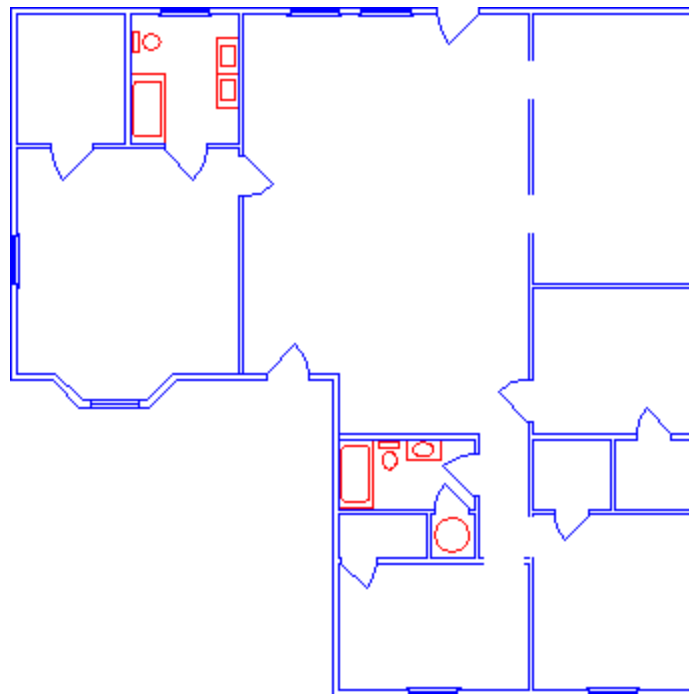
1. Begin by opening the *Blocks-arch* file in the C:\Steps\Lesson22 folder. Notice that the drawings have already been created for you.
  - 1.1. Create attributes for each (on the **Text** layer) as indicated in the chart that follows. Use an **Invisible** mode for each (clear all other modes). Then WBlock each to the C:\Steps\Lesson22\Library folder (create this folder if it isn't already there). (Use the same insertion points you used in Lesson 21.)

<u>BLOCK</u>	<u>TAG</u>	<u>PROMPT</u>	<u>DEFAULT VALUE</u>	<u>TEXT JUSTIFY</u>
Door	Type	What type is it?	Flush	
Door	Size	What size is it?		Center
Door	Mfgr	Who made it?	Ideal	
Door	MfrID	What is the ID?		
Window	Type	What type is it?	DH	
Window	Size	What size is it?		Center
Window	Mfgr	Who made it?	Anderson	
Window	MfrID	What is the ID?		
Sink	Type	What type is it?	Lav	
Sink	Size	What size is it?	18x30	
Sink	Mfgr	Who made it?	American	
Sink	MfrID	What is the ID?	W-POR-LA010	
Tub	Type	What type is it?	Tub	
Tub	Size	What size is it?	30x60	
Tub	Mfgr	Who made it?	American	
Tub	MfrID	What is the ID?	T/S030	
WC	Type	What type is it?	WC	
WC	Mfgr	Who made it?	American	
WC	MfrID	What is the ID?	W-POR-WC001	
WatrHtr	Type	What type is it?	WH	
WatrHtr	Size	What size is it?	50gal	
WatrHtr	Mfgr	Who made it?	American	
WatrHtr	MfrID	What is the ID?	E52	

- 1.2. Open the *FlrPln 22* file in the C:\Steps\Lesson22 folder.
- 1.3. Insert the blocks as shown in the *Fixture, Window, and Door Insertion* figure (next page) using the information in the following chart that follows.

- 1.3.1. The master bath window is 42x24
- 1.3.2. The bay window is 42x36
- 1.3.3. All other windows are 42x74
- 1.3.4. Outer wall doors are X-SOL-36 (solid core)
- 1.3.5. Inner wall doors are I-HOL-36 and I-HOL-30
- 1.3.6. Put a round WC in the mater bath and a smooth WC in the common bath
- 1.3.7. Put standard sinks in the master bath and an oval sink in the common bath

<u>BLOCK</u>	<u>TYPE</u>	<u>SIZE</u>	<u>MFRID</u>
Door	Flush	36"	X-SOL-36
Door	Flush	36"	I-HOL-36
Door	Flush	30"	I-HOL-30
Window	DH	42x24	2-DH-S
Window	DH	42x35	2-DH-M
Window	DH	42x74	2-DH-L
Sink	Lav	18x30	W-POR-LA010
Sink	Lav	18x30	O-POR-LA010
Tub	Tub	30x60	T/S030
WC	WC		W-POR-001R
WC	WC		W-POR-001S
WatrHtr	WH	50gal	E52



Fixture, Window, and Door Insertions

1.4. Save and close this drawing. (But we're not finished yet.)

1.5. Open the *Tara II Data Sheet* drawing.

1.6. Use the ADC to mine the *PID-22* drawing for the **Valve Table** table style.

Quantity	Name ▲	TYPE	SIZE	MFGR	MFRID	
4	Door	Flush	30"	Ideal	I-HOL-30	
5	Door	Flush	36"	Ideal	I-HOL-36	
2	Door	Flush	36"	Ideal	X-SOL-36	
3	Sink	Lav	18x30	American	W-POR-LA010	
2	Tub	Tub	30x60	American	T/S030	
1	WaterHtr	WH	50 gal	American	E52	
1	WC	WC		American	W-POR-WC001R	
1	WC	WC		American	W-POR-WC001S	
1	window	DH	42x24	Anderson	2-DH-S	
7	window	DH	42x74	Anderson	2-DH-L	
1	window	DH	42x35	Anderson	2-DH-M	
2	window	DH	42x74	Anderson	2-DH-L	

Data Arrangement

1.7. Begin the attribute extraction procedure you did in Exercise 22.4.1. This time, however, tell AutoCAD to Select Drawings (Step 3) and select the *FlrPln22* drawing you just completed. Use the **Valve Table** style you imported from the *PID-22* drawing.

1.8. Arrange the data as shown (see the figure on the previous page), and place it in the drawing between the other table and the notes.

1.9. Save the Data Sheet (next page).

Symbol Legend			
Symbol	Description	Symbol	Description
	20 Year Overlay		Ceiling Overlay
	Double Overlay		Day/Coat Overlay
	Fire Escape		Photocopy Overlay
	Fire/Smoke/Pool Box		Leased Overlay
	Single Overlay		Special Purpose Overlay
	TV Cable Overlay		Window Function Box

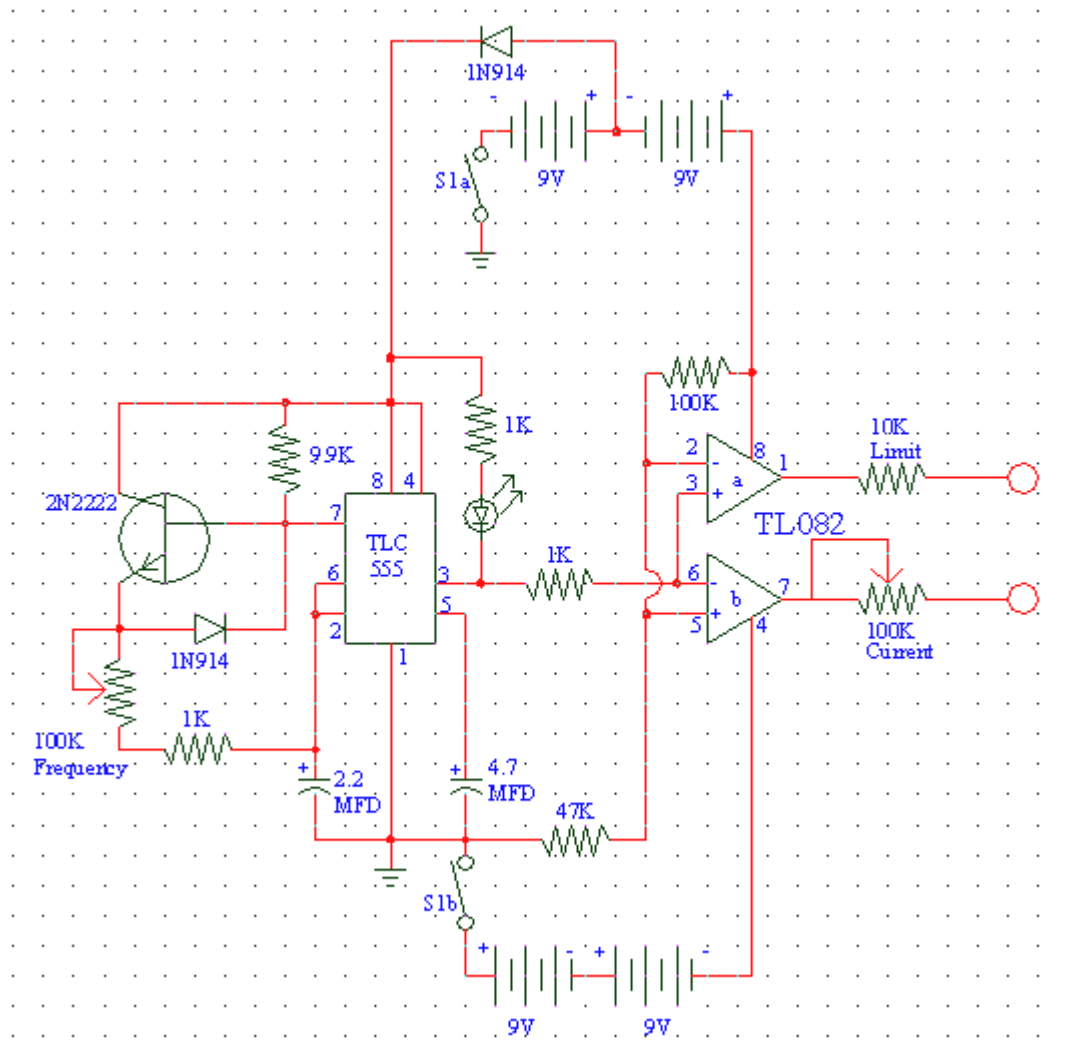
Materials List					
Quantity	Name	TYPE	SIZE	MEAS.	UNIT
4	Door	Flush	30"	36x48	3-PK-30
4	Door	Flush	36"	36x48	3-PK-36
2	Door	Flush	36"	36x48	3-PK-36
3	Work	Low	18X30	American	W-30X18-0110
2	Tab	Tab	30X60	American	T-30100
1	Window	Win	30 gal	American	W-30X18-01013
1	WC	WC		American	E-22
1	Window	Win	42X54	American	W-42X48-30-01113
7	Window	Win	42X54	American	2-0113
1	Window	Win	42X54	American	2-0114
2	Window	Win	42X54	American	2-0115

### The Terra II Floor Plan

- NOTES:
- SQUAREFIT: 100
  - ROOMS: Four
  - BATHS: Two
  - PLUMBING: commaterbooktop/MED utility
  - ELECTRICAL: entrance to each room, drive hood, bedrooms exhaust fan, kitchen refrigerator, and cable/demand
  - INSULATION: To be replaced, R14 run in all walls and R20 run in ceiling.
  - WALLS: Interior wall to be gypsum with contractor to core and fast. Sign to select paint from contractor options.
  - DOORS & WINDOWS: Interior doors to be hollow, exterior doors to be solid wood windows to be architect, contractor to provide materials.
  - HVAC: Full central heating and cooling system to be provided, contractor to provide and install previously to quote.
  - CABINETS: Sign to select from contractor options.
  - FLOORING: Sign to select from contractor options.

Houston Community College			
Para II Data Sheet			
Rev	By	Date	Notes
1	Forger	10/17/08	10/17/08
Revision			
1	Forger	10/17/08	10/17/08

2. Using what you've learned, create this drawing.
  - 2.1. Place the drawing on an appropriate title block (it was created on a 34"x22" sheet of paper and is NTS).
  - 2.2. Using attributes, create a BOM.



Design Courtesy of Thomas Miller or Richmond, Indiana

Write your answers on a separate sheet of paper.

1. An \_\_\_\_\_ allows a user to attach information to a block and retrieve that information later.
2. The command for defining attributes is \_\_\_\_\_.
3. An \_\_\_\_\_ attribute holds data that will not be shown on the screen or drawing.
4. A \_\_\_\_\_ attribute contains information that does not change.
5. When the attribute was created using the \_\_\_\_\_ mode, AutoCAD will first prompt the user to enter data and then prompt the user to verify the entered information.
6. When an attributed block is inserted into a drawing, the attribute prompts will (precede, follow) the standard insertion prompts.
7. To edit or change the tag, prompt, or default value of an attribute definition before creating the block, use the \_\_\_\_\_ command.

Set the (8) sysvar to (9) to use the Enter Attributes dialog box.

8.

9.

If you find that AutoCAD is not prompting at all for attribute information, check to be sure that the (10) sysvar is set to (11).

10.

11.

12. To edit attribute values, use the \_\_\_\_\_.

Setting the (13) sysvar to (14) will display all the attribute values assigned to blocks in the drawing.

13.

14.

15. Use the \_\_\_\_\_ command to change attribute values globally.

16. Use the \_\_\_\_\_ command to redefine a block to remove attributes.

(17) and (18) supply information in a block.

17.

18.

Extract attribute data from a drawing using the (19) command.

19.

20. Which of the following is not an attribute mode
- a) Invisible
  - b) Constant
  - c) Help
  - d) Verify
21. (T or F) WBlocking a symbol with its attributes creates an attributed block that is good only in the drawing in which it was created.
22. Which command must you use to place a block in a drawing?
- a) Block
  - b) Edit
  - c) Insert
23. (T or F) A template file is required to extract attribute data from a drawing.
24. (T or F) Using the Data Extraction wizard, you can create a table containing attribute information.
25. (T or F) Using the Data Extraction wizard, you can sort and arrange your extraction table.
26. (T or F) Even though the Data Extraction wizard has made attribute extraction very easy to do, you still must manually update the extraction table if you change the drawing.
27. (T or F) In a drawing using Annotative scaling, you should set up your visible attributes to also use annotative scaling.
28. (T or F) You can only use single line text as attributes.
29. If you intend to use an attribute as part of a dynamic block's action, you must put a check next to \_\_\_\_\_ in the mode frame of the Attribute Definition dialog box.
30. You (can, cannot) use a field as part of an attribute definition.
31. You (can, cannot) extract attribute data directly into an Excel spreadsheet.

## Answers

1. Attribute
2. Attdef
3. Invisible
4. Constant
5. Verify
6. Follow
7. DDEdit
8. Attdia
9. 1
10. Attreq
11. 1
12. Properties Palette
13. ATTDISP
14. On
15. -Attedit
16. Battman
17. AutoCAD
18. The User
19. DataExtraction
20. c
21. F
22. c
23. F
24. T
25. T
26. F
27. T
28. F
29. Lock Position
30. can
31. can