

AIM

What are LAYERS and their  
functions?  
?

# INTRO TO LAYERS

- In drafting, different elements or components of drawing might be separated by placing them on different sheets.
- When each sheet is perfectly aligned with the other, you have an **overlay system**.
- In AutoCAD, the component of this overlay system are referred to as **layers**.

# INTRO TO LAYERS

- All the Layers can be reproduced together to reflect the entire design drawing.
- Individual layers might also be reproduced to show specific details or components of the design.

# INTRO TO LAYERS

How can working with layers increase your productivity in AutoCAD?

- Specific information can be grouped on separate layers. For example, the floor plan can be drawn on one layer, the electrical plan on another and the plumbing on a third.
- Several plot sheets can be referenced from the same drawing file by modifying layer visibility.

# INTRO TO LAYERS

How can working with layers increase your productivity in AutoCAD?

# INTRO TO LAYERS

How can working with layers increase your productivity in AutoCAD?

- ◉ Drawings can be reproduced in individual layers, or the layers can be combined in any desired format.
- ◉ The floor plan and electrical floor plan can be reproduced together and sent to an electrical contractor for a bid.
- ◉ Each layer can be assigned a different color, linetype, and lineweight to help improve clarity.

# INTRO TO LAYERS

Why would a designer turn off a layer in a drawing?

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Why would a designer turn off a layer in a drawing?

- Selected layers can be turned off or frozen to decrease the amount of information displayed on the screen or to speed regeneration.
- Changes can be made to a layer promptly, often while the client watches.



# LAYERS IN DIFFERENT DRAFTING FIELDS

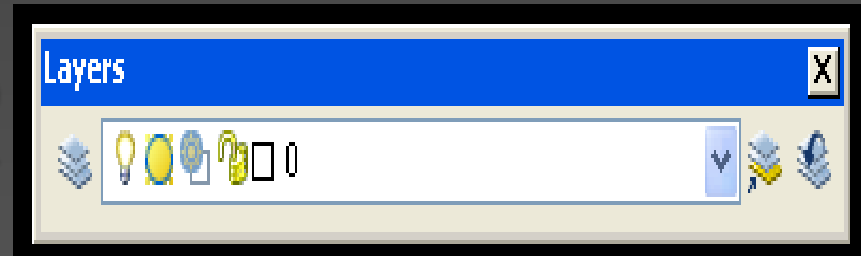
What are a few drafting fields  
“(companies)” that uses layers to identify  
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# LAYERS IN DIFFERENT DRAFTING FIELDS

What are a few drafting fields  
“companies” that uses layers to identify  
their drawings?

- ◉ Mechanical drafters
- ◉ Architectural drafters
- ◉ Civil drafters
- ◉ Interior designers
- ◉ Electrical drafters

# CURRENT LAYER



- **Layer 0** is the AutoCAD default current layer.
- Until another layer is defined and set current, all objects drawn are placed on and belong to layer 0.
- It is advisable to draw on layers you create other than the 0 layer when a new drawing is started.
- **Layer 0** is typically reserved for the creation of blocks symbols, which will be discussed later on.

# NAMING LAYERS

Why should we name our layers?

# NAMING LAYERS

Why should we name our layers?

- Layers should be given names to reflect what is drawn on them.

MECHANICAL	ARCHITECTURAL	CIVIL
OBJECT	WALLS	PROPERTY LINE
HIDDEN	WINDOWS	STRUCTURE
CENTER	DOORS	ROADS
DIMENSION	ELECTRICAL	WATER
CONSTRUCTION	PLUMBING	CONTOURS
HATCH	FURNITURE	GAS
BORDER	LIGHTING	ELEVATIONS

# NAMING LAYERS

- For very simple drawings, layers can be named by linetype and color.
- Exp. Layer **continuous-white** can have a continuous line drawn in white.
- Exp. Layer **object 7** can be used to indicate an object line with color 7.

# NAMING LAYERS

If you use a numbering or lettering system to name your layers, why would u keep a written record of your numbering system for reference?

# NAMING LAYERS

If you use a numbering or lettering system to name your layers, why would u keep a written record of your numbering system for reference?

- Forget what the number or letter layer stand for
- Co workers might need to work on your drawings, and they will need to know which each layer belongs to in the drawing.



# NAMING LAYERS

- The American Institute of Architects (AIA) has established a layer naming system for architectural and related drawings. This standard is found in the document CAD Layer Guidelines, published by AIA.

# LAYER PROPERTIES MANAGER

How do we open the Layer Properties Manager dialog box?

# LAYER PROPERTIES MANAGER

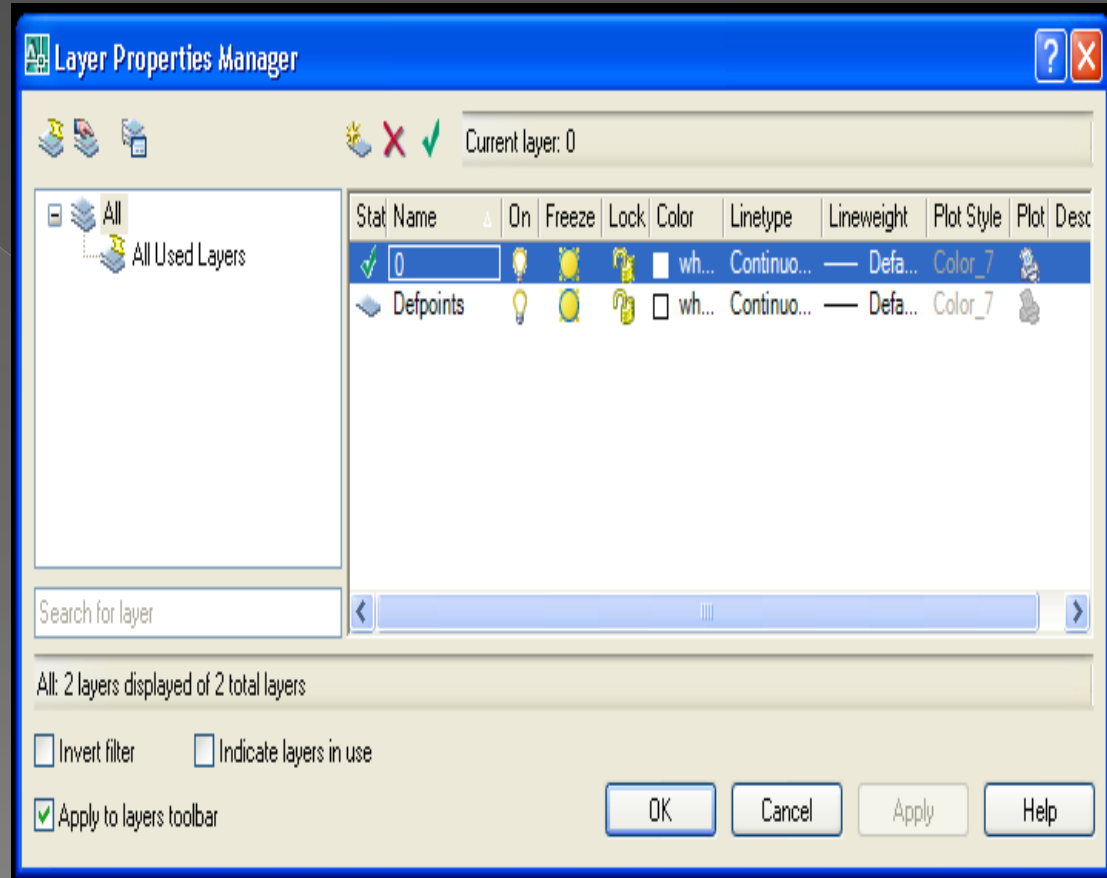
How do we open the Layer Properties Manager dialog box?

- Click the **Layer Properties Manager** button from the **Layers** toolbar.
- Select **Format > Layer...** from the pull-down menu
- Type **LA** or **LAYER**.

# LAYER PROPERTIES MANAGER

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# LAYER PROPERTIES MANAGER

- Only one layer is required in an AutoCAD drawing.
- The **most important** layer is the current layer because whatever you draw is placed on this layer. It is useful to think of the current layer as the top layer.
- **Layers** should be added to a drawing to meet the needs of the current drawing project.

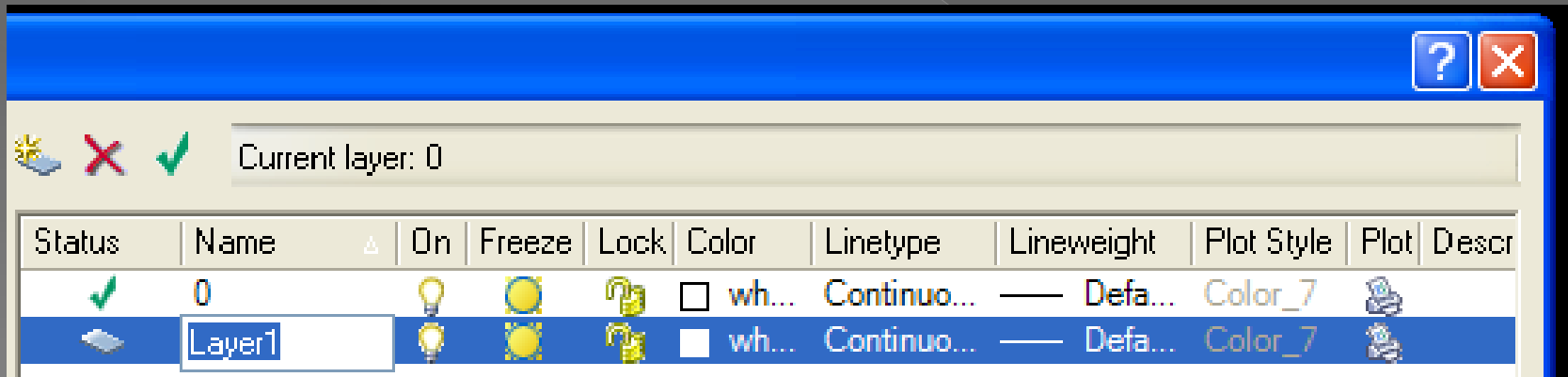
# CREATING LAYERS

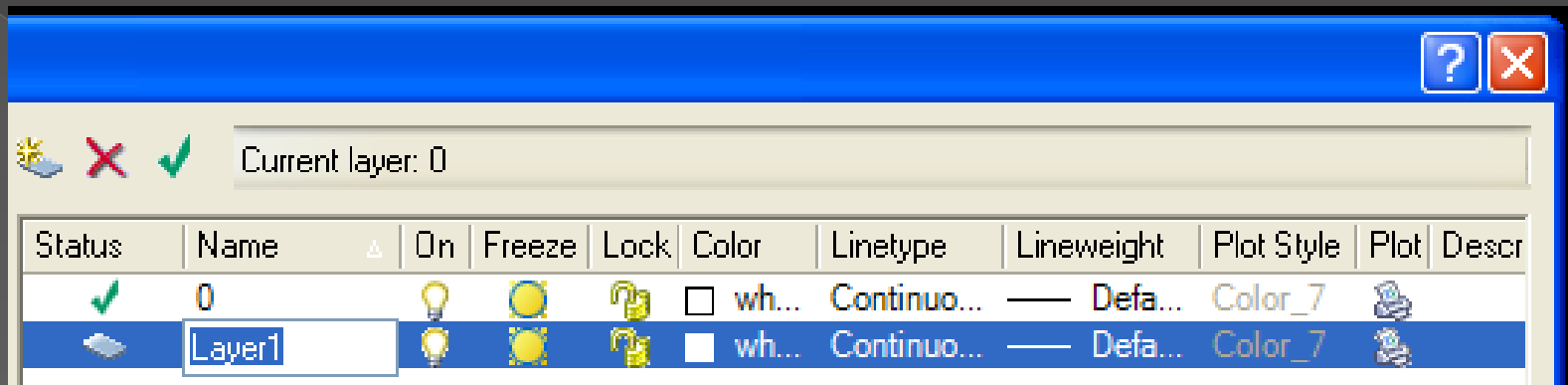
How do we add a new layer?

# CREATING LAYERS

How do we add a new layer?

- Click the **New Layer** button from the **Layer Properties Manager** dialog box.
- A new layer listing appears, using a default name of Layer1.



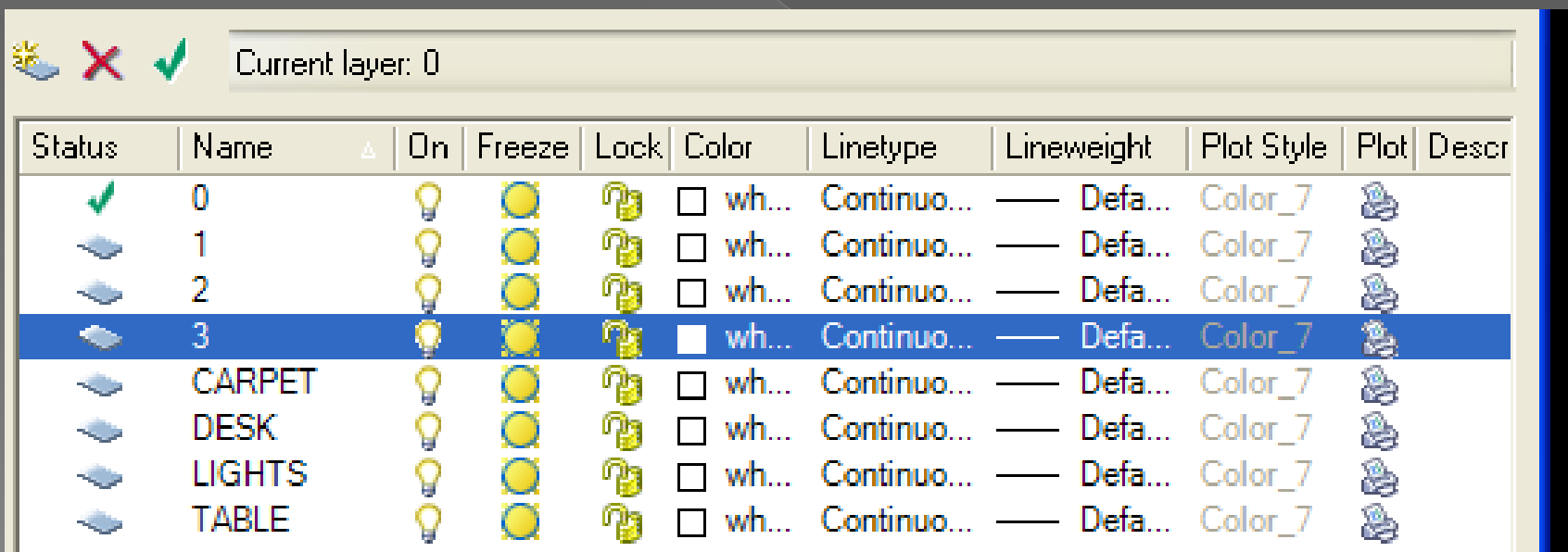


- The layer name is highlighted when the listing appears, allowing you to type a new name.
- You can also enter several new layer names at the same time.
- Type: a layer name then pressing the comma key enters the first layer name and moves on the next one.
- Click the **OK** button when you are finished typing the new layer names.



# CREATING LAYERS

- When you open **Layer Properties Manager** dialog box, the new layer names



Current layer: 0

Status	Name	△	On	Freeze	Lock	Color	Linetype	Lineweight	Plot Style	Plot	Descr
✓	0		☹	☹	🔒	□ wh...	Continuo...	— Defa...	Color_7	🖨	
☹	1		☹	☹	🔒	□ wh...	Continuo...	— Defa...	Color_7	🖨	
☹	2		☹	☹	🔒	□ wh...	Continuo...	— Defa...	Color_7	🖨	
☹	3		☹	☹	🔒	□ wh...	Continuo...	— Defa...	Color_7	🖨	
☹	CARPET		☹	☹	🔒	□ wh...	Continuo...	— Defa...	Color_7	🖨	
☹	DESK		☹	☹	🔒	□ wh...	Continuo...	— Defa...	Color_7	🖨	
☹	LIGHTS		☹	☹	🔒	□ wh...	Continuo...	— Defa...	Color_7	🖨	
☹	TABLE		☹	☹	🔒	□ wh...	Continuo...	— Defa...	Color_7	🖨	

# Deleting Layers

How do we delete a layer in AutoCAD?

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How do we delete a layer in AutoCAD?

- ◉ **Select the layer**
- ◉ Click the **Delete Layer** button.
- ◉ Click the **Apply** button
- ◉ If the selected layer is not deleted, an object in the drawing has been drawn on this layer.

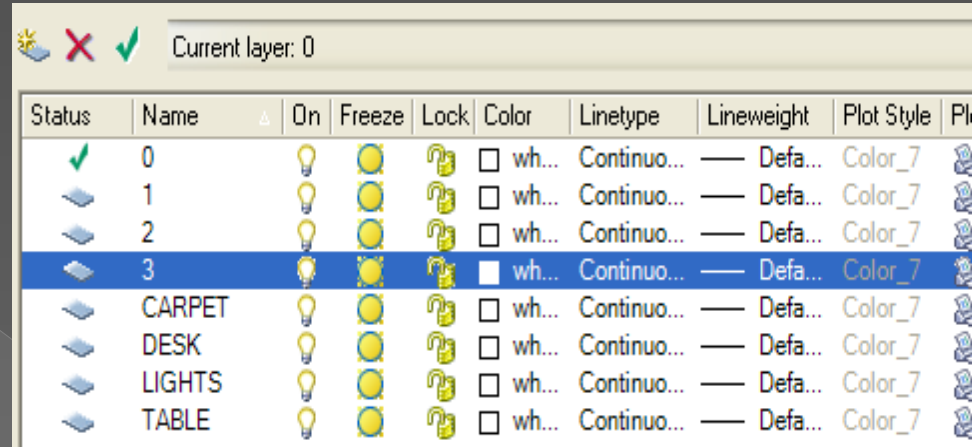
# Current Layers

How do you make another layer current in AutoCAD?

# Current Layers

How do you make another layer current in the?

- You can set a new current layer by double-clicking the layer name from the Layer Properties pull-down menu.
- In the Layer Properties Manager dialog box highlight the layer name in the layer list and then click the **Set Current** button.
- Click **ok**



# Summary

How do we open the **Layer Properties Manager** dialog box?

How do we add a new layer in AutoCAD?

How do we delete a layer in AutoCAD?

# Exercise 4-1