LESSON 3 SYMBOLS AND DRAWINGS

STRUCTURE

3. SYMBOLS AND DRAWINGS

In Lesson 2, we learnt how to draw elementary objects like lines, rectangles, spiral and circle using tools. We also learnt elementary operations on objects like selecting, aligning, grouping, rotating and skewing. In Lesson 3, we will be learning to work with symbols and drawings.

3.0 Objectives

After going through this lesson, you will be able to

- Work with symbols.
- Create illustrations using objects and symbols.
- Work with layers in creating art-work.

3.1 Introduction

Till now we learnt how to create objects in Corel Draw, but if you explore the inbuilt inventory of Corel Draw Graphics, you will find that it has a vast library enriched with plenty of symbols and drawings stored in it. It is therefore important to learn to work with symbols, and to use symbols in creating various patterns. In this lesson you will also be familiarized with the concept of layers and their use. We are sure you will enjoy working with them.

3.2 Working with Symbols

The CorelDraw application lets you create objects and save them as symbols. Symbols are defined once and can be referenced many times in a drawing. Using symbols instead of objects that appear many times in a drawing helps to reduce file size.

3.2.1 Creating, editing, and deleting symbols

Symbols are created from objects. When you convert an object to a symbol, the new symbol is added to the library, and the selected object becomes an instance. You can also create a symbol from multiple objects.

You can edit a symbol; any changes you make affect all instances in a drawing. You can also delete a symbol from the library.

3.2.2 To convert an object to a symbol

- Select an object or multiple objects.
- Click Edit Symbol, New symbol.

Tip: You can also convert an existing object or objects to a symbol by dragging the object or objects to the Library Docker window/palette.

3.2.3 To edit a symbol

- In the Library Docker window/palette, choose a symbol from the Symbols list. If you want to name or rename the symbol, double-click the symbol's name box, and type a name.
- Click the Edit symbol button.
- Modify the objects on the drawing page.
- Click the Finish editing symbol tab in the bottom-left corner of the drawing window.

Notes: Changes made to a symbol are automatically made to all instances in the active drawing.

Tips: You can also edit a symbol by selecting an instance in the drawing window, and clicking the Edit symbol button on the property bar.

3.2.4 To insert a symbol instance

- Open the Library Docker window/palette by clicking Edit → Symbol Library.
- Choose a symbol from the Symbols list.
- Click Insert.

Tip: You can also insert a symbol instance by dragging a symbol from the Library Docker window/palette to the drawing window.

3.2.5 To delete a symbol

- In the Library Docker window/palette, choose a symbol from the Symbols list.
- Click the Delete button.

Note: When you delete a symbol, it is removed from the library, and all instances of the symbol are removed from the drawing.

3.2.6 Using symbols in drawings

You can insert a symbol into a drawing, which creates a symbol instance. You can modify certain properties of a symbol instance, such as size and position, without affecting the symbol stored in the library. You can revert a symbol instance to an object or objects while preserving its properties. You can also delete a symbol instance.

3.2.7 To modify a symbol instance

- Select a symbol instance.
- Make any changes.

Tip: When a symbol instance is selected, you can modify the object properties given on the property bar.

3.2.8 To revert a symbol instance to an object

- Select a symbol instance.
- Click Edit Symbol, Revert to object(s).

Note: The symbol remains in the library.

3.2.9 To delete a symbol instance

- Select a symbol instance.
- Press Delete.

Note: The symbol remains in the library.

Given below is an example of a drawing with symbols (Fig. 3.1).

Fig. 3.1 An example of a drawing with symbols

Self-check Questions

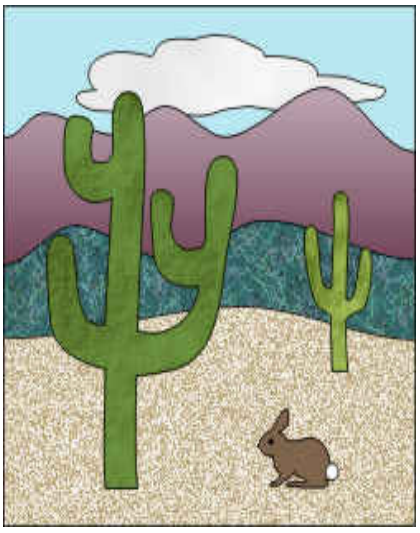
1. How are symbols created?
2. How can you insert a symbol in the art work?

3.3 Illustration of Drawing with Symbols

3.3.1 Illustration of the use of symbols in creating needlepoint and cross stitch patterns

This example given below will show you how to convert your CorelDraw drawing to a graph that you can use for needlepoint or counted cross-stitch.

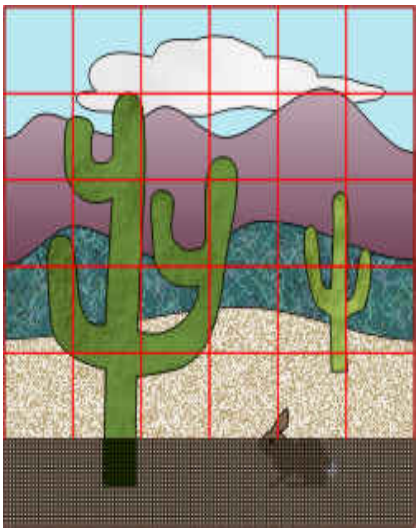
The Cactus



This design was drawn in a six inch square. You can make your design any size as long as it can be divided into one-inch squares. Some texture fills and gradient fills to the picture may be added to indicate "texture" as shown at right.

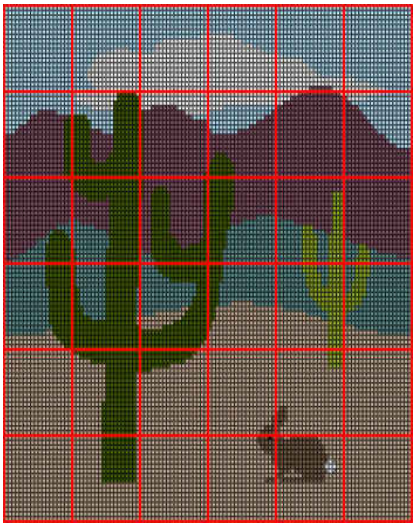
The texture in needlepoint or cross stitch usually comes from the type of stitch and yarn or thread that is used.

Keep a separate file of your picture and print it out to use as a reference. Copy and Paste your picture into a New file. Using the Graph Tool divide your picture into even one inch squares. Enable Snap to Guidelines and Snap to Objects. The design is divided into 6 squares horizontally and vertically as shown in the figure. Put a red outline of .020 on it to have needlepoint canvas. Cross-stitch fabric would be 18 x 18 stitches per inch. You can use any size canvas or cross Stitch number. The larger the number, the more detail you can get.



At this point, select the Pick tool and right click on it. Go to Properties and put a check in the box that says, "Treat all objects as filled." Starting at the lower left hand corner cover the first square with another graph that is 18 squares horizontally and vertically. Ungroup that square and fill each square to correspond to the color of your picture. Just use a plain color as close to your design as possible.

Remember that the stitch, yarn or thread will add the texture. Using your Shift key you can select many squares at one time. Just be careful not to accidentally hit the outline of what you are filling. When you have the first one-inch square finished, continue across the bottom to the next one.



You can add half stitches to your design. In the figure half stitches are added to the tail of the rabbit. Fill the stitch, in this case, white and duplicate it. Convert it to curves and delete the appropriate corner. Fill the underneath square with the color behind it. Half stitches are used in counted cross-stitch.

If by accident you fill an area outside the square you are working on and you are out of Edit Undo, do not panic. Delete that object. Go to your original design and copy and paste that object back into your picture.

Continue in this manner until you have all the squares filled. It is your choice whether or not you leave the red lines and bring them to the front. The red lines help you keep your place. The finished diagram is shown above.

3.4 Working with Layers

Layering gives you an added flexibility while organizing and editing the objects in complex drawings. You can divide a drawing into multiple layers, each containing a portion of the drawing's contents.

You can also display selected objects. Hiding a layer lets you identify and edit the objects on other layers. This also reduces the time CorelDraw needs to refresh your drawing when you edit it.

Each new file has one Master Page that contains and controls three default layers: the Grid, Guides, and Desktop layers. The Grid, Guides, and Desktop layers contain the grid, guidelines, and objects outside the borders of the drawing page.

The Desktop layer lets you create drawings you might want to use later. You can specify settings for the grid and guidelines on the Master Page. You can specify settings, for example color, for each layer on the Master Page.

You can add one or more master layers to a Master Page. This layer contains information that you want to display on every page of a multi-page document.

For example, you can use a master layer to place a header, footer, or static background on every page.

3.4.1 To create a layer

Create a layer:	Click Tools→ Object manager. Click the flyout button, and then click New layer.
Create a master layer:	Click Tools → Object manager. Click the flyout button, and Click New master layer.

Notes: To use a layer in the drawing, you must first make the layer active. In the Object manager Docker window/palette, the active layer is highlighted in red. When you start a drawing, the default layer (Layer 1) is the active layer. When you create a master layer, it moves to the Master Page.

Tips: You can also add a layer by clicking the New layer button in the Object manager Docker window/palette.

You can make any layer a master layer by right clicking.

3.4.2 To Display or Hide a Layer

- Click Tools → Object manager.
- Click the Eye icon beside the layer name.

The layer is hidden when the Eye icon is grayed.

Tip: You can also display or hide a layer by right clicking the layer in the Object manager Docker window/palette and clicking Visible.

3.4.3 To Display Pages, Layers, and Objects

Display pages	Click Window Dockers / Palettes Object manager. Click the flyout button and then Show pages.
Display layers	Click Window Dockers / Palettes Object manager. Click the Layer manager view button.
Display objects	Click Window Dockers / Palettes Object manager. Click the flyout button and then Expand to show selection.

3.4.4 To Delete a Layer

- Click Tools → Object manager.
- Click the name of a layer.
- Click the flyout button, and click Delete layer.

Notes: When you delete a layer, you also delete all the objects on it. To retain an object on the layer you are deleting, move it to a different layer first.

You can delete any unlocked layer except the three default layers of the Master Page (Grid, Guides, or Desktop). For more information about locking and unlocking layers, see "To set a layer's editing properties".

3.4.5 To Specify Settings for a Layer on the Master Page

- Click Tools, Object manager.
- Right-click the layer, and click Properties.
- Change the settings and click OK.

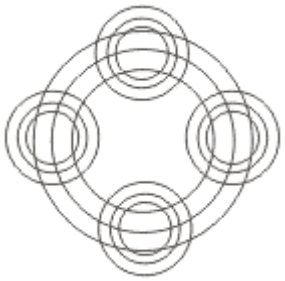
Self-check Questions

1. What are layers?
2. How do you initialize layers?

3.5 Exercises

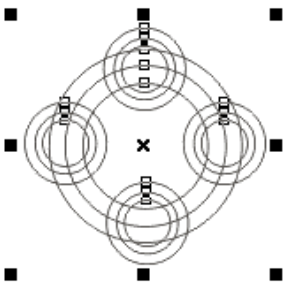
3.5.1 Exercise 1

- Create a symbol of the object you need to use frequently. It is easier to use symbol than to copy paste.
- Open CorelDraw. Use any drawing tool and create a drawing for making symbol. It can be created with single object or more than one complex objects.

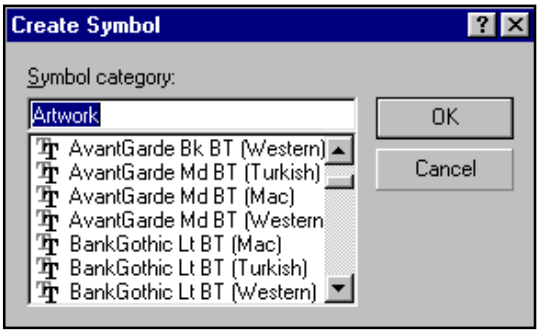


- Select the drawing. Arrange → Combine

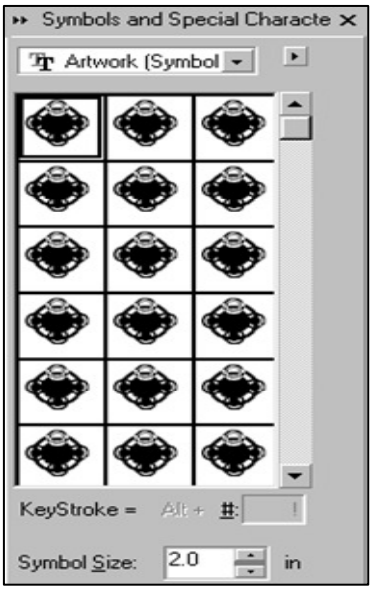
Note: Symbol cannot be created until all the objects in the drawing are not combined. This rule is not applicable for single object. The object has to be closed.

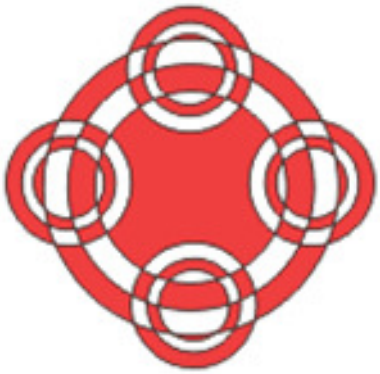


- Tools → Create → Symbol.
- Name your own category to save the symbol. We have named it as "Artwork". Click OK.



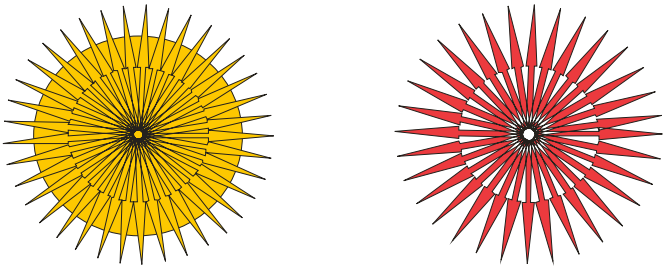
- If you want to use the symbol Tools → Symbols and Special Characters.
- Select the "Artwork" category in the drop down menu. The symbol will be displayed in the list. Drag the symbol onto the page.

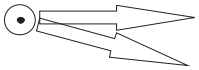


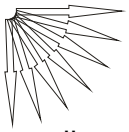


- You can fill the symbol with any color.

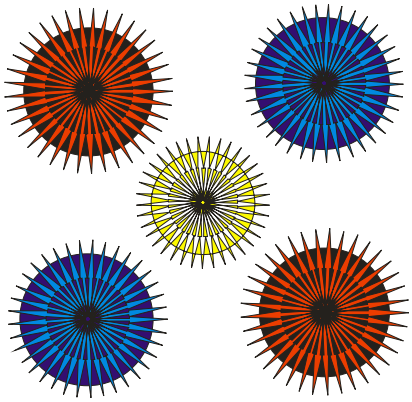
3.5.2 Exercise 2



- To get this design the Basic Shapes Tool was used. Select arrow shapes, click on the arrow shape you will find a red spot, keep the cursor on the red spot it changes in to [⊙] this shape.
- Drag the circle shape till the end like this. 
- Now selection position changes to skew and rotation, now keep the cursor at one corner for rotation, pull it downwards and right click the mouse like this. 



- Press Ctrl+R simultaneously until we get the above yellow design. Then select all the arrows together and group them from the Arrange menu to get the yellow design.
- If we opt to 'Combine' instead of 'Group', the result will be the red design. Fill colours of choice as given below.
- Place them as desired and we can use these designs for saris, home furnishings etc.



3.6 Assignments

3.6.1 Class assignment

i) Make a drawing / design from existing symbol library.

ii) Make a 2-layer drawing.

3.6.2 Home assignment

i) Download a symbol from the Internet and add it to the symbol library.

3.7 Summing Up

In Lesson 3, we learnt how to work with symbols and create drawings using symbols. We also learnt how to layer complex drawings. In Unit 2, we would be focusing our attention to working with Pages and Layout Tools.

3.8 Possible answers to Self-check Questions

1. Symbols are created from objects. When you convert an object to a symbol, the new symbol is added to the library, and the selected object becomes an instance.

2. Symbols are inserted using inset character option from text menu. Symbols are now available as fonts. Various symbol shapes are available in windings font.

3. All CorelDRAW drawings consist of stacked objects. The vertical order of these objects-the stacking order-contributes to the appearance of the drawing. You can organize these objects using invisible planes called layers.

   Layering gives flexibility organizing the objects in complex drawings. Drawing objects can divide a drawing into multiple layers, each containing a portion of the drawing's contents.

4. Layer options are initialized through the window options docker window menu. Layers are separated with master layer and new layers for various objects. Layers can be selected or hidden using eye button in the layer docker window.

3.9 Terminal Questions

1. What is the advantage of using symbols?

2. How do you convert a symbol instance to an object?

3. What is the advantage of layering in a complex designs?

4. Which are the three default layers?

3.10 Suggested Further Reading and References

1. http://www.fayette.k12.il.us/99/Intro2Comp/introduction_to_computers.html
2. http://www.sketchpad.net/corel.htm
3. http://www.clicknlearn.com/TipsTricks/TipsTricks.htm

3.11 Glossary

1.	Instance	A single item of information that is representative of a type CXmhaU
2.	RevertReturn	dmng Cgr ñWmZ `m ê$n _| bm¡Q>Zm
3.	Dockers	Loaders ^aZo dmbo
4.	Palette	A flat surface on which artists mix paints and the range of colors used a§J n{Å>H$m