## Creating patterns in COREL DRAW

The following tools and controls are used in this tutorial: Freehand tool, Shape tool, Join Nodes, Convert to Curves, Mirror and Duplicate, Rotate and Repeat, Angle of Rotation.

1. Start Corel DRAW, and click New blank document on the Welcome screen. Set up the document as shown in Figure 1.


Figure 1
2. Select the Freehand tool (F5). Draw a straight vertical line by holding down Ctrl, clicking in the drawing window to start the line, and then clicking to end it. Do not drag to draw the line.
3. Select the Shape tool (F10). Click anywhere on the line, and click the Convert to curves button on the property bar (Figure 2).


Figure 2
4. Click the third handle from top to bottom, and drag it to the left and slightly downwards. You'll get a shape similar to the one shown in Figure 3.
5. Select the object by using the Pick tool and drag the middle left handle to the right while holding down Ctrl to create a perfectly mirrored object. Before releasing the left mouse button, right-click once to create a mirror duplicate (Figure 4).


Figure 3


Figure 4
6. Select both objects, and click Arrange > Combine (or press Ctrl+L). With the combined object still selected, click the Shape tool (F10). Marquee select the two top nodes, and click the Join two nodes button on the property bar (the highlighted button in Figure 5). Next, marquee selects and joins the bottom nodes of the object.


Figure 5
7. Now, we have a single closed object. Fill this object with any color from the color palette. The final object must look like the object in Figure 6. If the object is not filled with color, then something went wrong while you were joining the nodes or combining the objects. You may need to revisit Step 6.
8. With the object still selected, click it to change the size handles to rotation handles. Hold down Ctrl, and drag the object centre, which is also the center of rotation, to the bottom of the object as shown in Figure 7.

9. Holding down Ctrl to constrain the angle of rotation, start to rotate the object by any degree divisible by 5 as shown in Figure 8. Before releasing the left mouse button, right-click once to create a duplicate. Press $\mathbf{C t r l}+\mathbf{R}$ repeatedly to create rotated duplicates until the circle is complete (Figure 9).


Figure 8
10. Using the Pick tool, marquee select all objects, and press Ctrl+L to combine them (Figure 10).

Different patterns can be created by altering the curve of the shape in Step 4 and by using different angles of rotation. In this example, the objects have been rotated by $30^{\circ}$.


Figure 9
Figure 10


Figure 11
Figure 12

Various patterns can be created by using different curve shapes and angles of rotation.

