

Question -1:

(*Tic-tac-toe board*) Write a program that displays a tic-tac-toe board, as shown in Figure 14.43b. A cell may be X, O, or empty. What to display at each cell is randomly decided. The X and O are images in the files **x.gif** and **o.gif**.

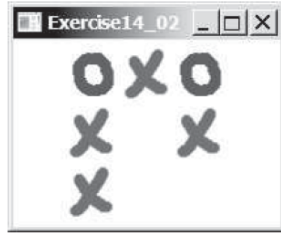


Figure 14.43b

Question-2:

(*Characters around circle*) Write a program that displays a string Welcome to Java around the circle, as shown in Figure 14.44b. Hint: You need to display each character in the right location with appropriate rotation using a loop.



Figure 14.44b

Question-3:

(*Display a STOP sign*) Write a program that displays a STOP sign, as shown in Figure 14.47b. The octagon is in red and the sign is in white. (*Hint*: Place an octagon and a text in a stack pane.)



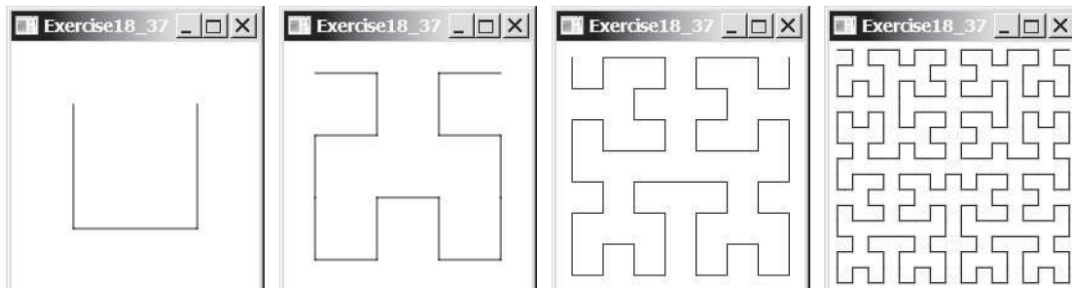
Figure 14.47b

Question-4:

(Use the *CTockPane* class) Write a program that displays two clocks. The hour, minute, and second values are **4**, **20**, **45** for the first clock and **22**, **46**, **15** for the second clock, as shown in Figure 14.51c.

Question-5 (extra credit):

(*Hilbert curve*) The Hilbert curve, first described by German mathematician David Hilbert in 1891, is a space-filling curve that visits every point in a square grid with a size of 2×2 , 4×4 , 8×8 , 16×16 , or any other power of 2. Write a program that displays a Hilbert curve for the specified order, as shown in Figure 18.19.



Hilbert curves of orders 1, 2, 3, and 4.