

In this program, we are using a **modal** dialog box to gather up hardware parameters from the user.

A synchronized thread is used to set this parameters into “virtual hardware” and enable a timer. In this case, the “hardware” is simulating a real time clock, the digits of which are painted in the client window.

Notes and Hints:

- Always paint nine (9) bitmaps in the client area. A "blank" bitmap is provided for the cases to act as a placeholder or pad.
- All bitmaps are 29 x 29 pixels; the DIGIT_WIDTH and DIGIT_HEIGHT constants are also provided.
- Hours go from 1 to 12 in 12-hour mode, with the leading zero blanked; hours go from 00-23 in 24-hour mode with the leading zero displayed.
- Minutes and seconds always go from 00-59 (with leading zeroes).
- To get the tens digit, do a divide (/) by 10; to get the ones digit, find the modulus (%) of 10.
- If seconds are not displayed, blink the colon that separates the hours and minutes, by alternating between the colon and blank bitmaps. Do modulus 2 of the second or check the least significant bit of the second to decide which bitmap to use. Or use a Boolean flag that alternates between True and False values.

See the working executable, called **TickTock.exe** for exact details of operation.