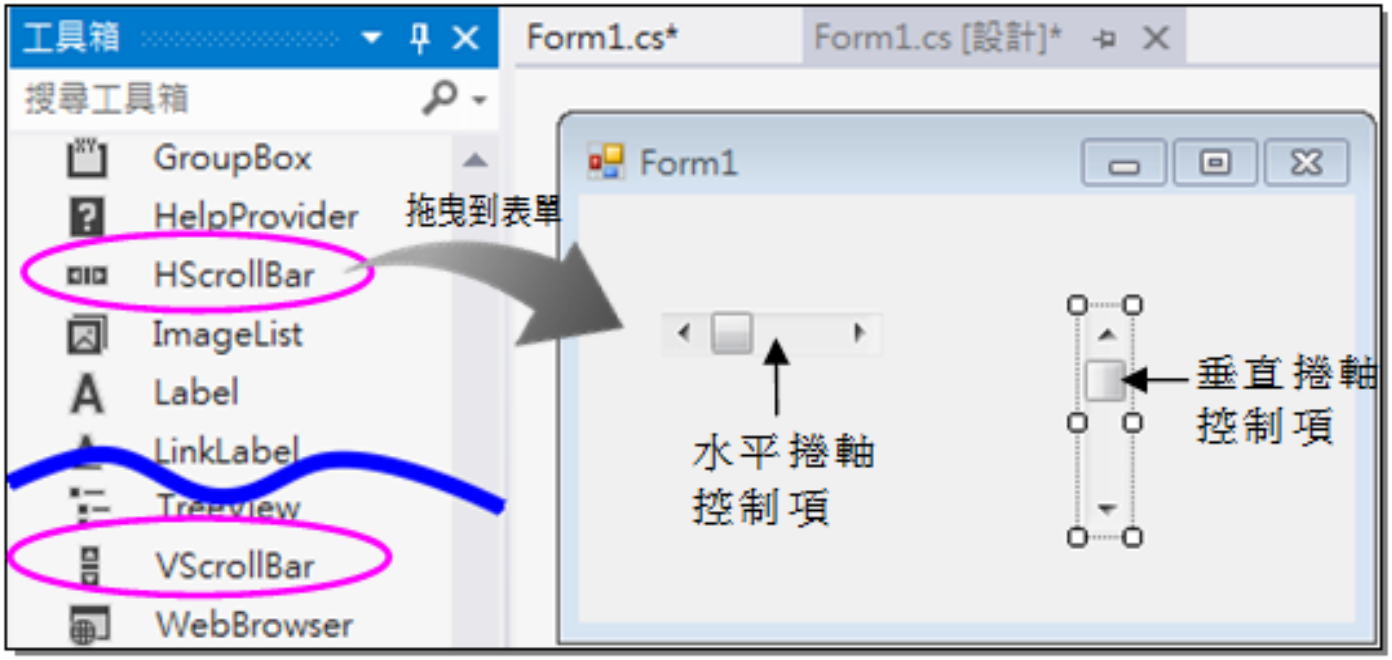
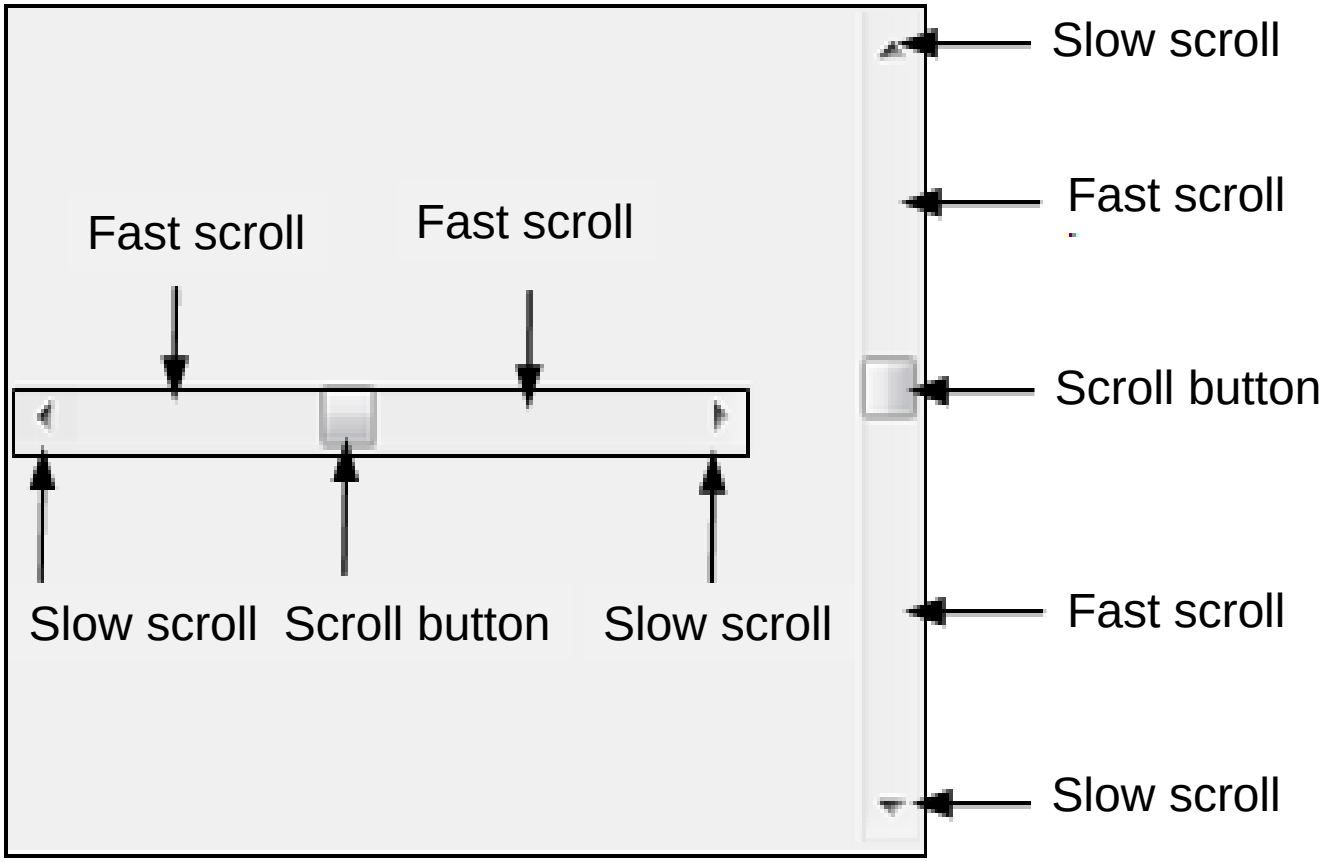
Chapter 9

9-1 ScrollBar Control Item

- Horizontal scroll bar
- Vertical scroll bar




Slow scroll
Fast scroll
Scroll button
Fast scroll
Slow scroll
Fast scroll
Fast scroll
Slow scroll
Scroll button
Slow scroll

ScrollBar Properties

Property	Description
Value	Get or set the value of control item
LargeChange	Set the increment when the user presses fast scroll, default: 10
Maximum	Set the maximum of Value, default: 100
Minimum	Set the minimum of Value, default: 0
SmallChange	Set the increment when user presses slow scroll, default: 1

ScrollBar Events

1. **Scroll Event**
   - **Default event**
   - **Triggered when the mouse or keyboard moves the scroll button**
2. **ValueChanged Event**
   - **Triggered when Value is changed**
   - **Scroll event is triggered after the ValueChanged is executed**
   - **ValueChanged event → Scroll event**

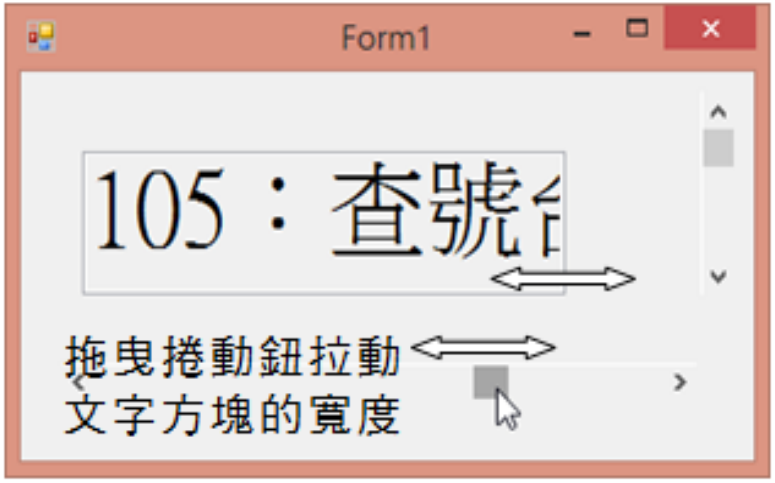
Example(telephone):

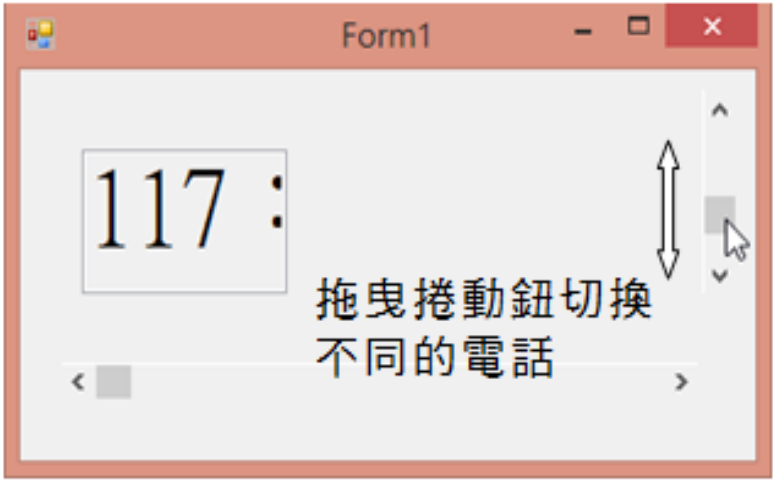
Design a testing program for public phone number. Requirements:

1. The text box on the form shows public phone number. The width of text box is 100 when the program starts, users drag scroll button to change the width of text box, the maximum value is 300
2. Users drag the vertical scroll button to change 5 different phone numbers. There are “105: 查號台”, “108: 長途台”, “110: 報案台”, “117: 報時台”, “166: 氣象台”

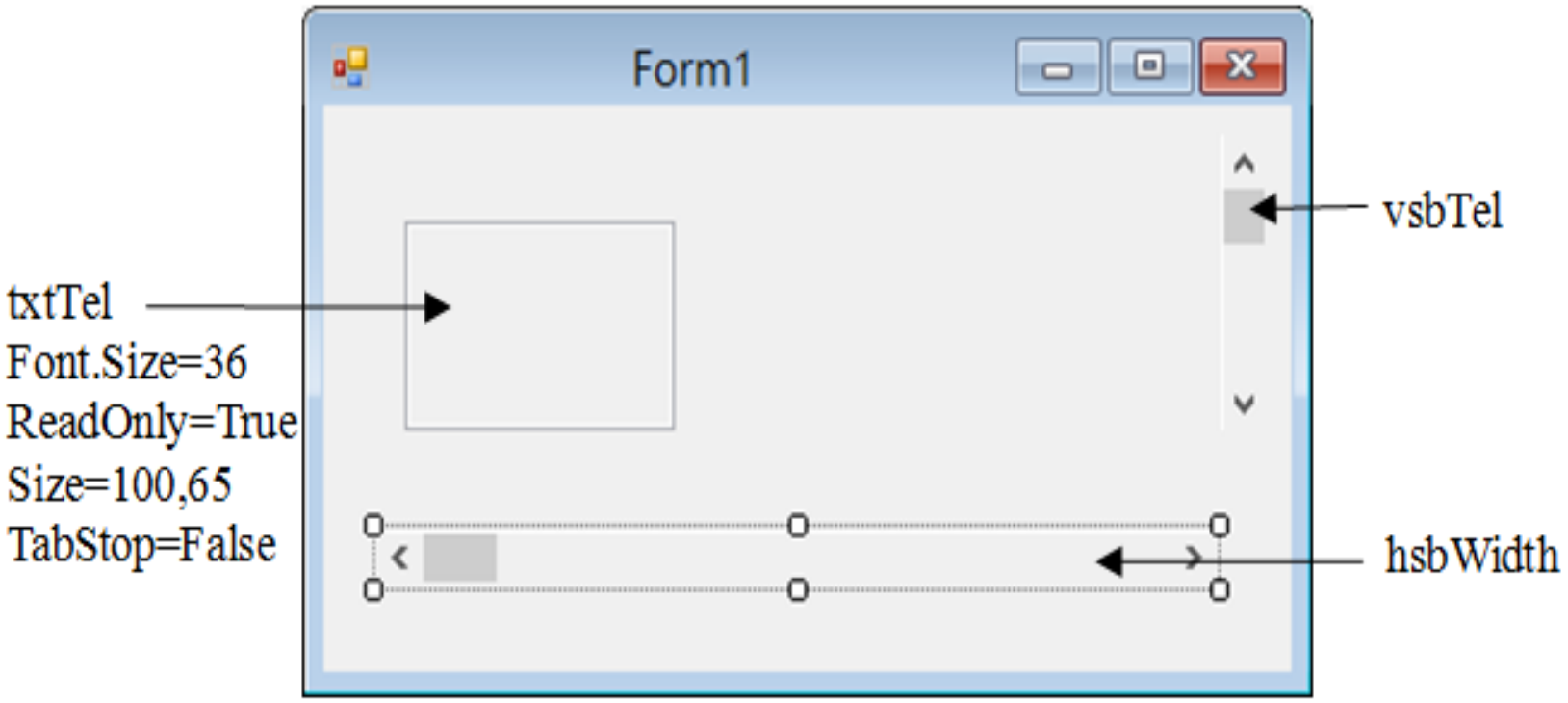
Result:

Form1
程式開始時
105 :

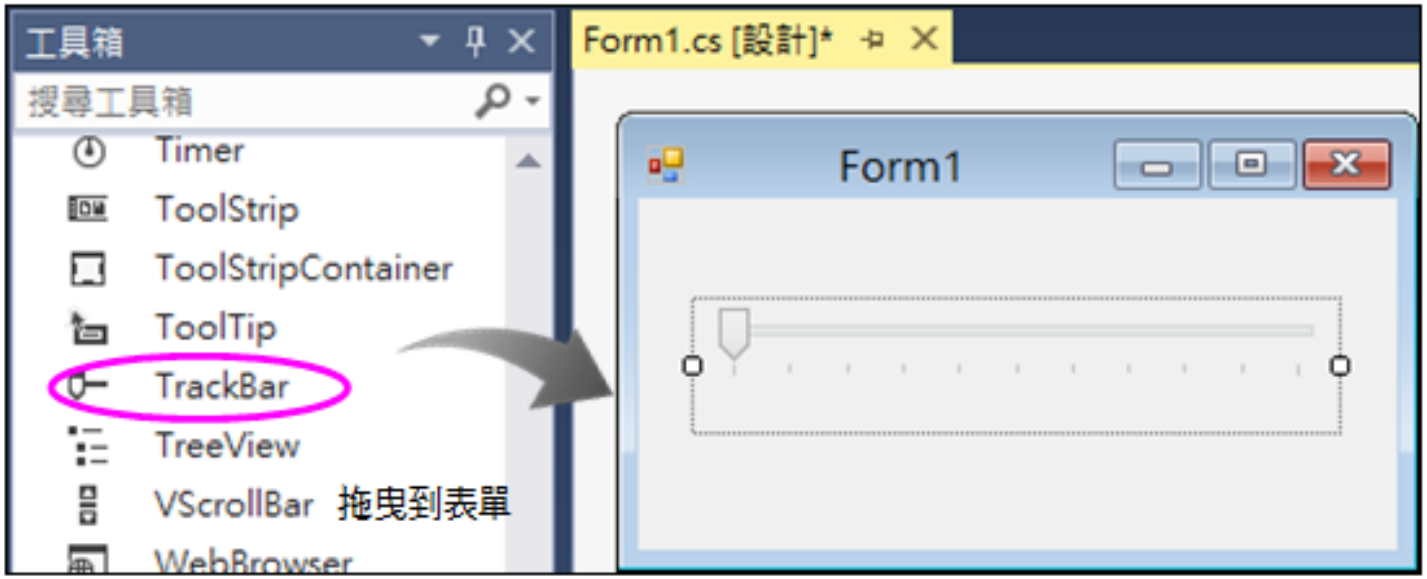

Form1
105 : 查號台
拖曳捲動鈕拉動
文字方塊的寬度


Form1
117 :
拖曳捲動鈕切換
不同的電話

Design User Interface



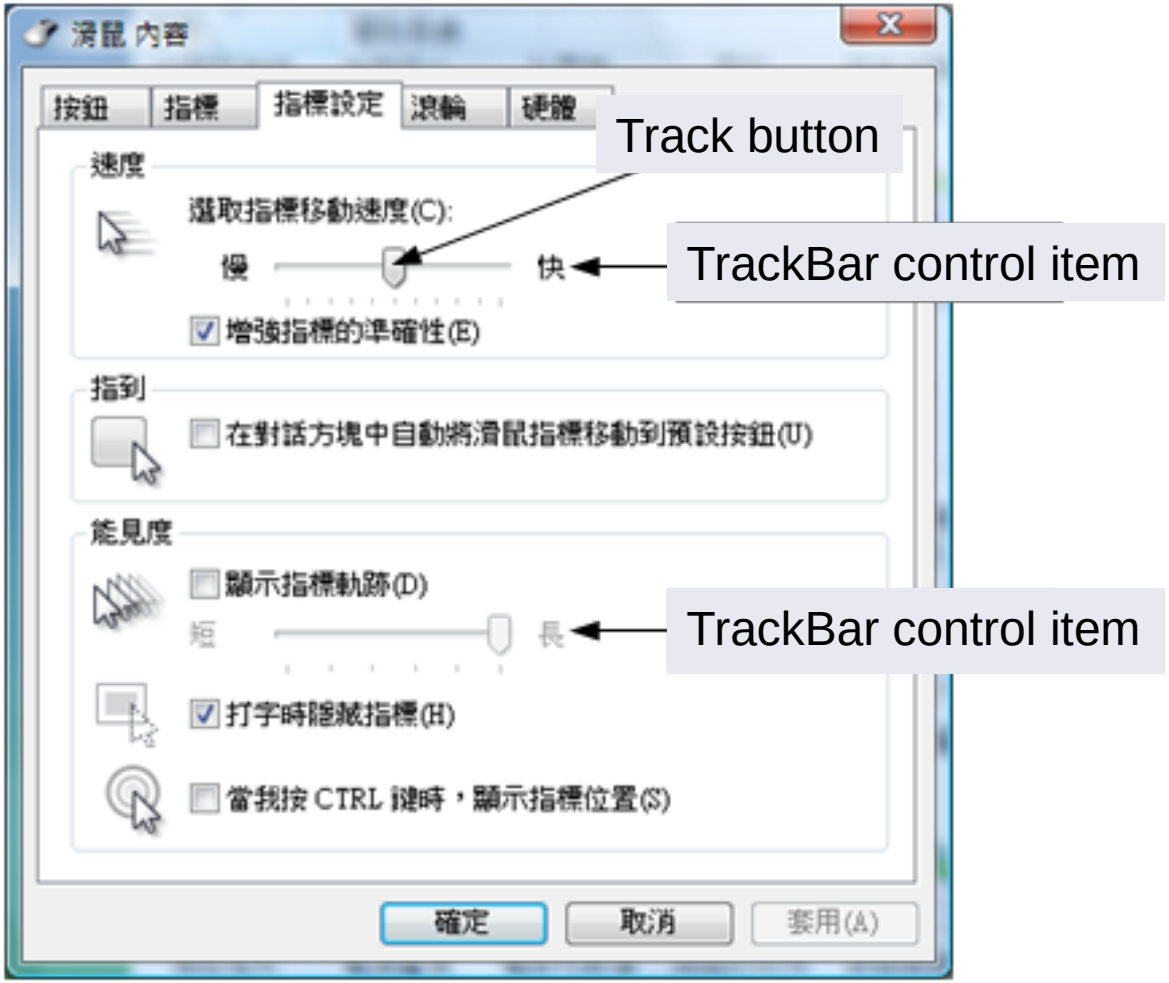
9-2 TrackBar Control Item



TrackBar Properties

Property	Description
Value	Get or set the value of current control item, default: 0
Maximum	Set the maximum Value, default: 10
Minimum	Set the minimum Value, default: 0
LargeChange	Set the increment of Value when users press PageUp/PageDown or fast move, default: 5
SmallChange	Set the increment of Value when users press direction keys on the keyboard, default: 1
Orientation	Horizontal: shown horizontally Vertical: shown vertically
TickFrequency	Set the distance of scales, default: 1
TickStyle	Set the position of scales, default: BottomRight BottomRight： None: TopLeft： Both:

TrackBar Control Item



TrackBar Events

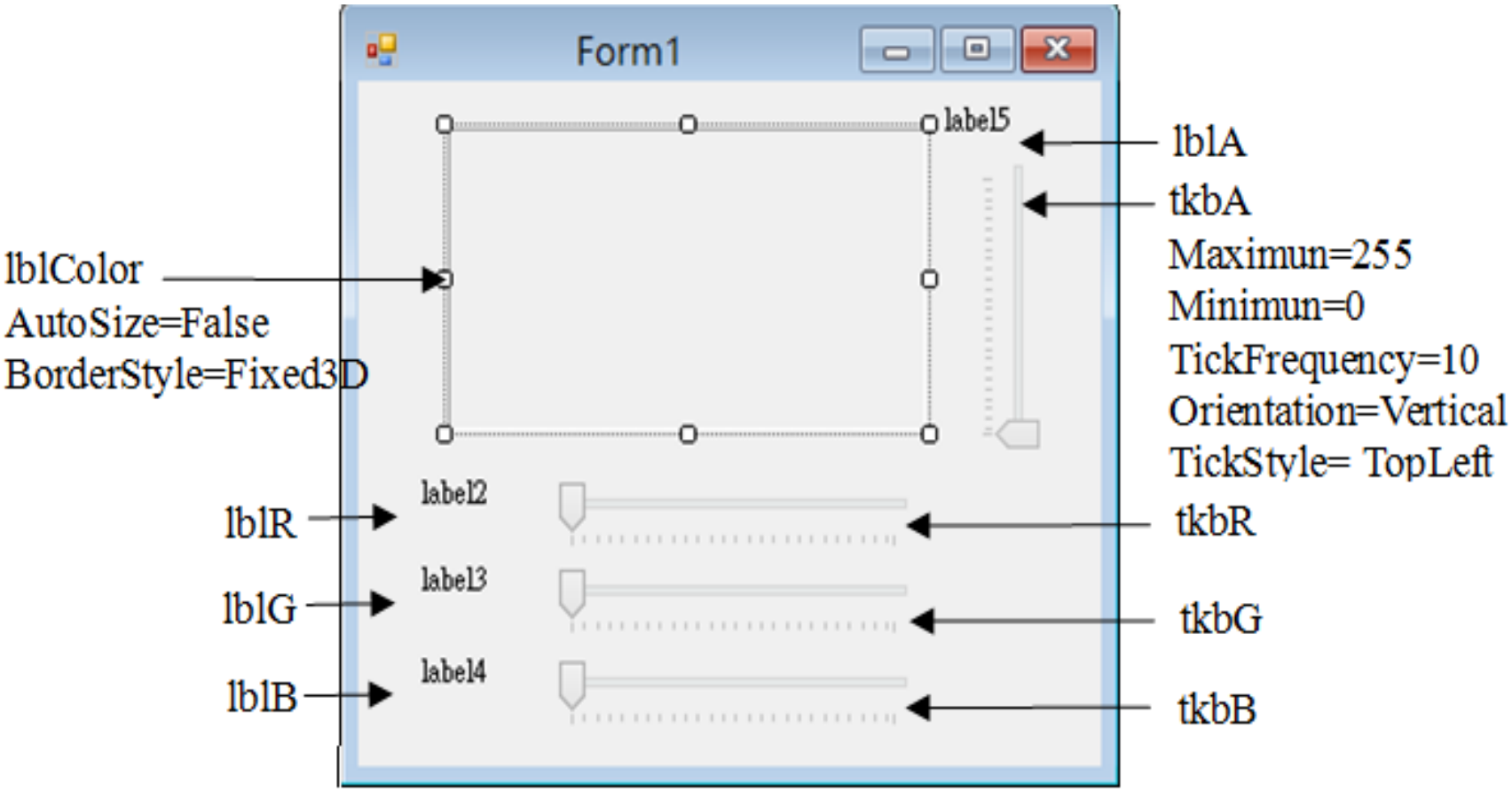
1. Scroll Event
   - default event
   - triggered when user drags the trim button
   -use code to change the value
   - will only trigger ValueChanged event
2. ValueChanged Event
   - triggered when Value property is changed
   - Scroll event is triggered after ValueChanged is executed
   - ValueChanged event → Scroll event

Example(color):

Design a program to show color. Requirements:

1. Label on the form shows the result color. When the program starts, the transparency is 255, red, green and blue is 128.
2. When users trim the track bars of transparency, red, green and blue, the label shows the result color immediately, the labels in front of track bars also show the current value

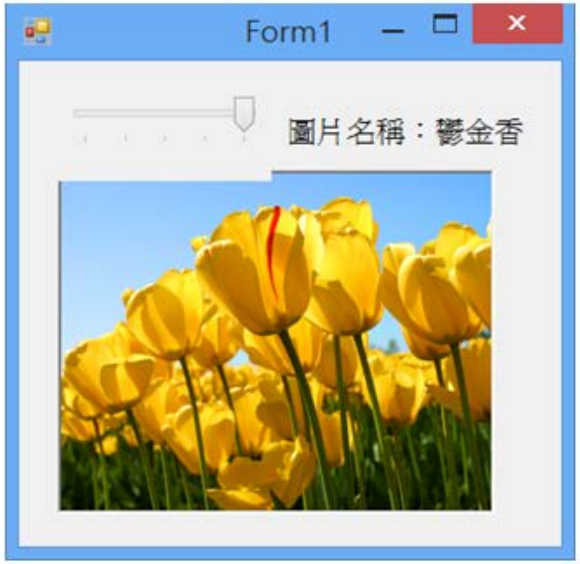
Design User Interface



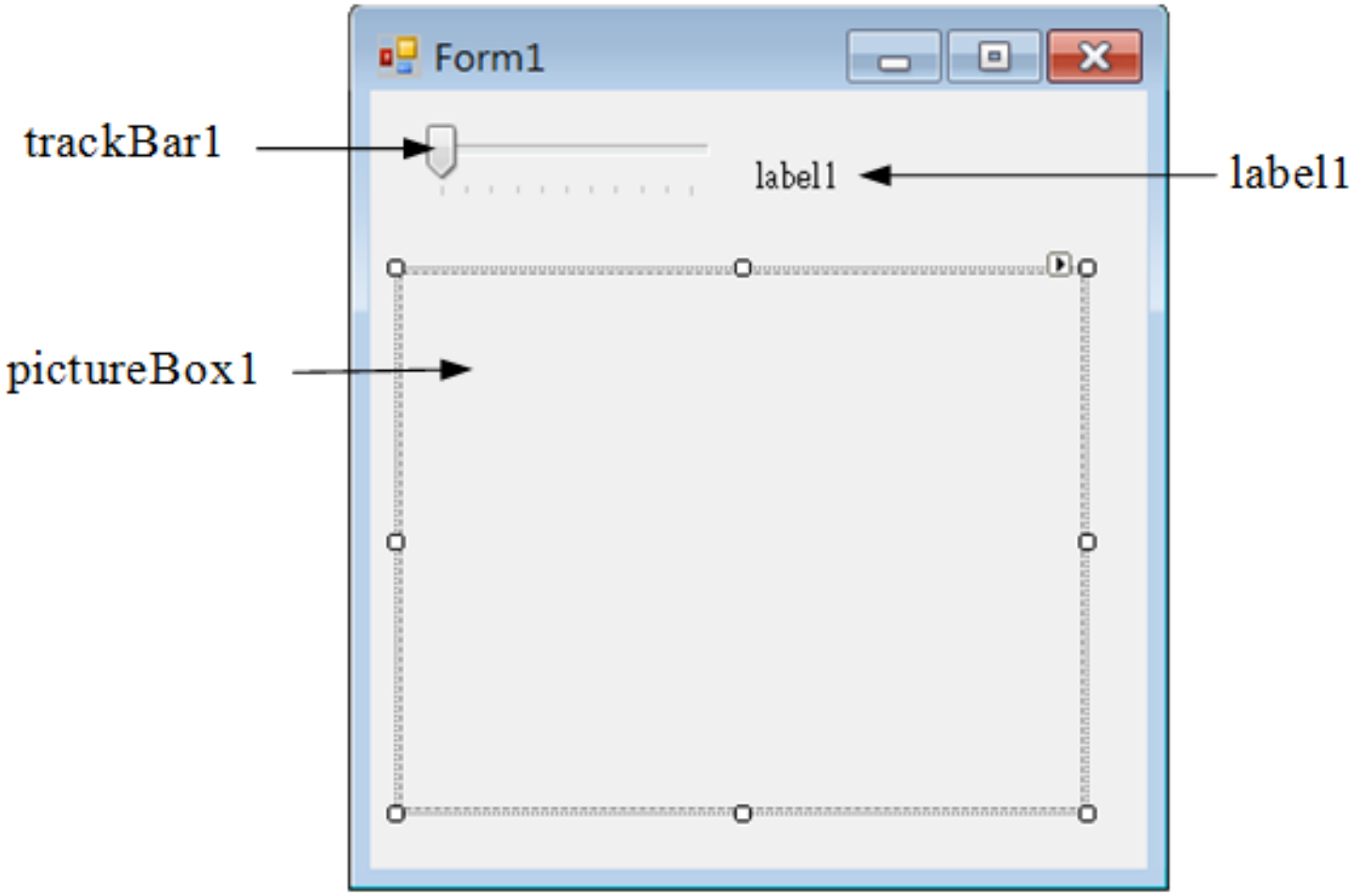
Example(WinTrackBar):

Use TrackBar control item to design a picture viewer program. the program loads names of 5 images called “企鵝”, “沙漠”, “無尾熊”, “菊花” and “鬱金香” (without extension .jpg) and puts them into photo[0]~photo[4] string array elements. The PictureBox shows corresponding image when track bar is rolled.

Result:

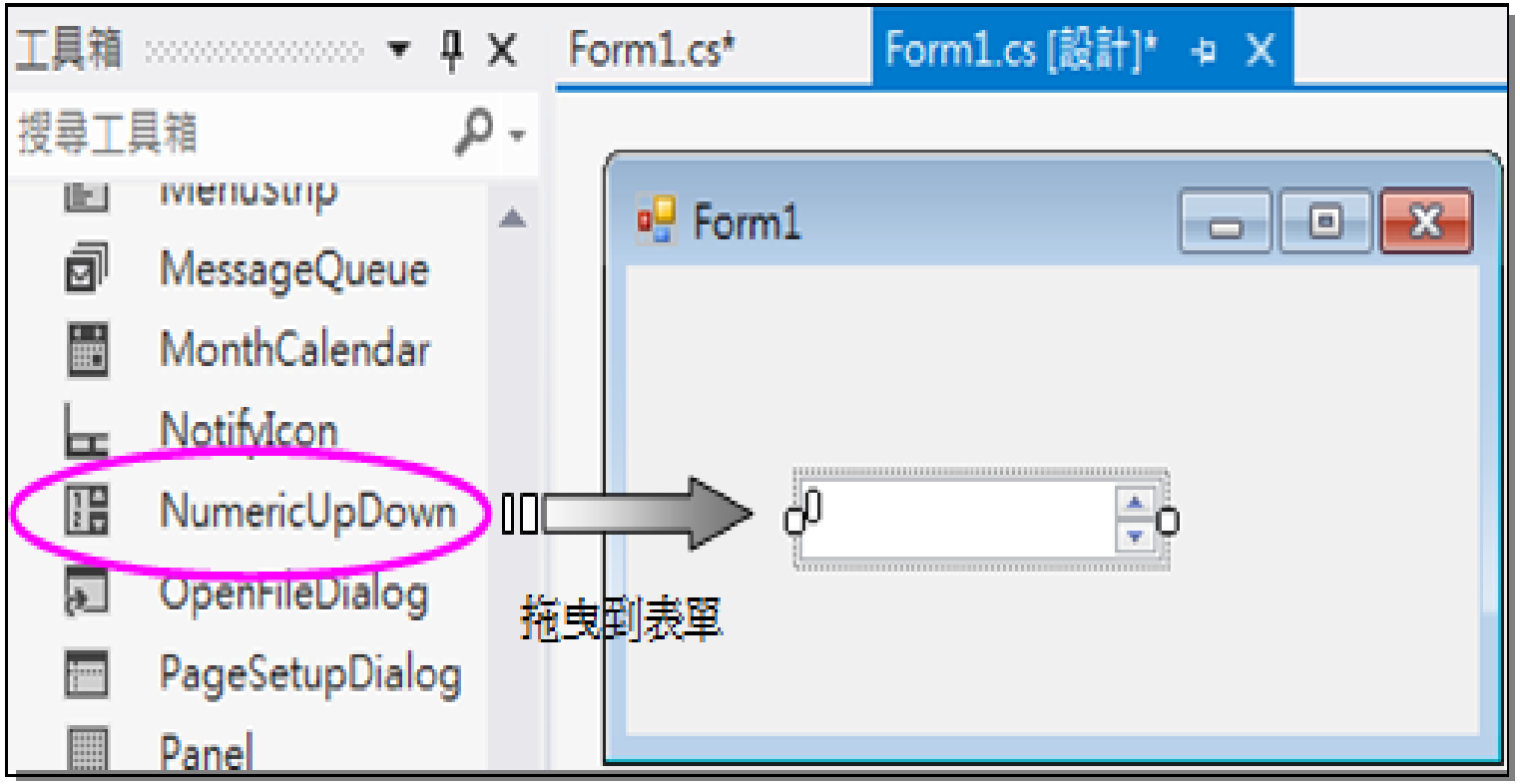


Design User Interface



9-3 NumericUpDown Control Item

- Choose the value in a specific scope
- Prevent from overflow input



NumericUpDown Properties

Property	Description
DecimalPlaces	Set the decimal digits, default: 0 Ex: show 1 digit
Increment	Set the increment of adjust, default: 1. DecimalPlaces has to be 1 if Increment is set to 0.2
InterceptArrowKeys	Set whether use up and down keys on keyboard, default: True
Maximum	Set the maximum value
Minimum	Set the minimum value
ReadOnly	Set whether the keyboard input is acceptable, default: False
Value	Get or set the value of control item

NumericUpDown Methods

UpButton() Method:

Like press up button on the user interface, Value is increased

Grammar
controlItemName.UpButton();

DownButton() Method:

Like press down button on the user interface, Value is decreased

Grammar
controlItemName.DownButton();

NumericUpDown Events

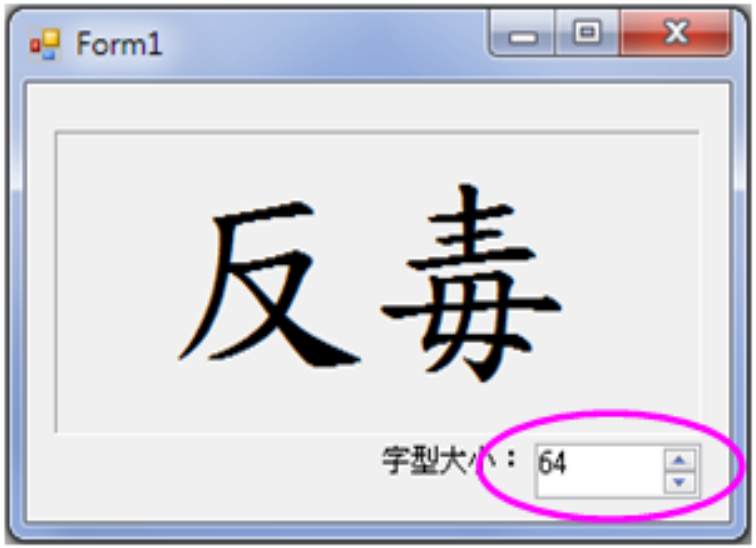
- Default event is ValueChanged
- Triggered when Value is changed

Example(fontSize):

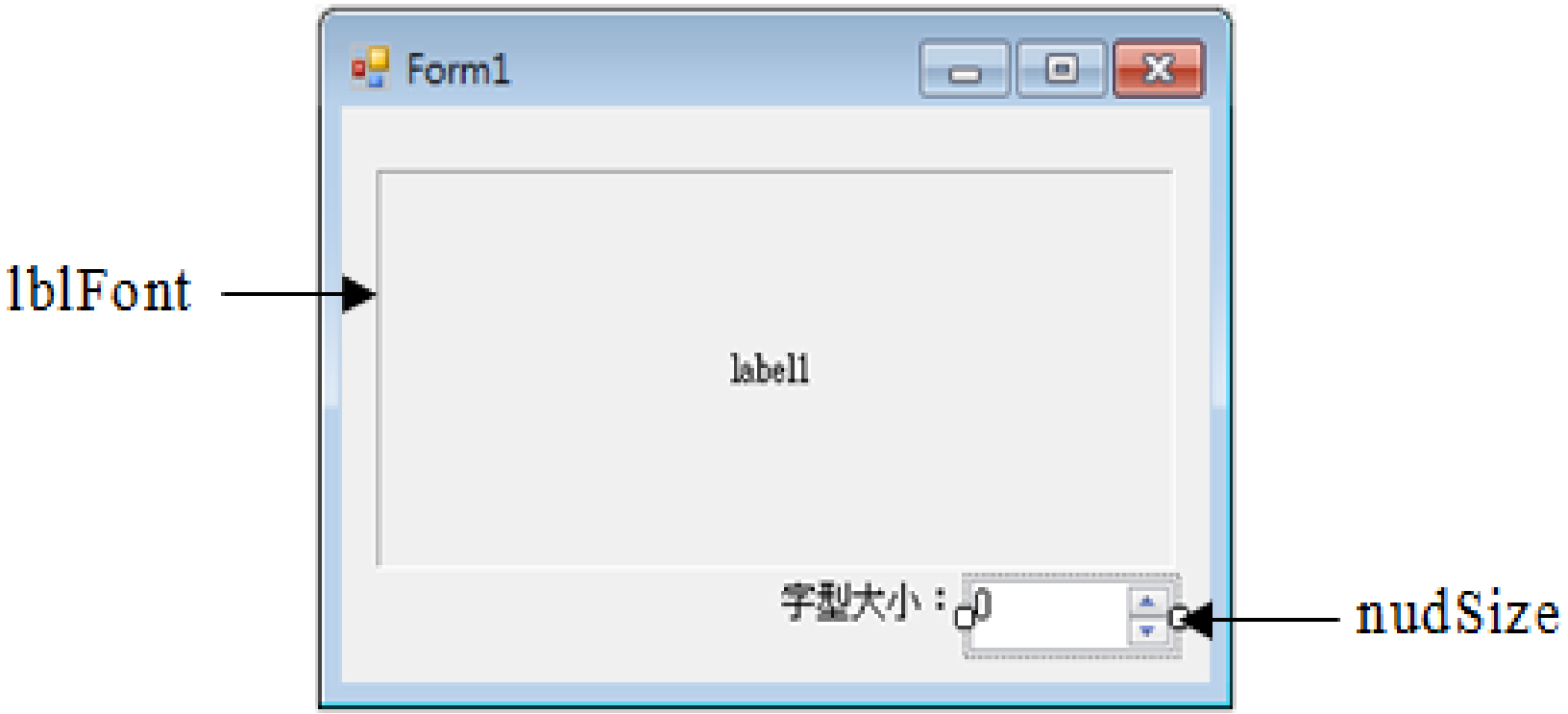
Design a program which can change the size of words:

1. Label shows text “反毒”, users can use NumericUpDown control item to change font size
2. The scope of font size is 8~80, increment is 4 the default value is 24

Result:



Design User Interface



Example(WinNumericUpDn):

Use NumericUpDown control item to design a English word practice program. The program shows “one” when NumericUpDown changes to 1; the program shows “two” when NumericUpDown changes to 2, and so on

Result:

Design User Interface

9-4 ProgressBar Control Item

Properties

Property	Description
Maximum	Get or set the maximum value of the progress bar, default: 100 Get or set
Minimum	the minimum value of the progress bar, default: 0
Value	Get or set the current position of the progress bar Set
Step	the increment of the progress bar, default: 10

Methods

Method	Description
PerformStep	Increase the value of the progress bar by the value of Step

Example(ProgressBar):

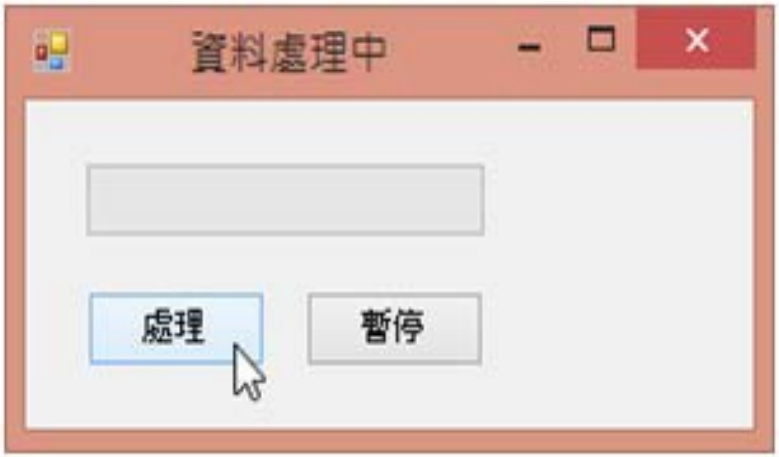
Use timer to simulate the waiting for data process, requirement:

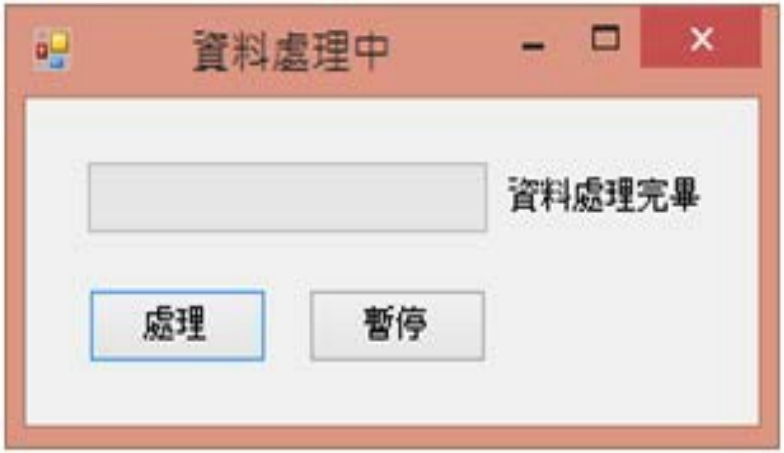
1.The maximum value of progress bar control item is 100, the minimum value is 0, the increment is 10. If the progress bar is full, label1 shows “資料處理完 畢” and the progress bar is reset.

2.Timer is triggered every 0.1 sec.

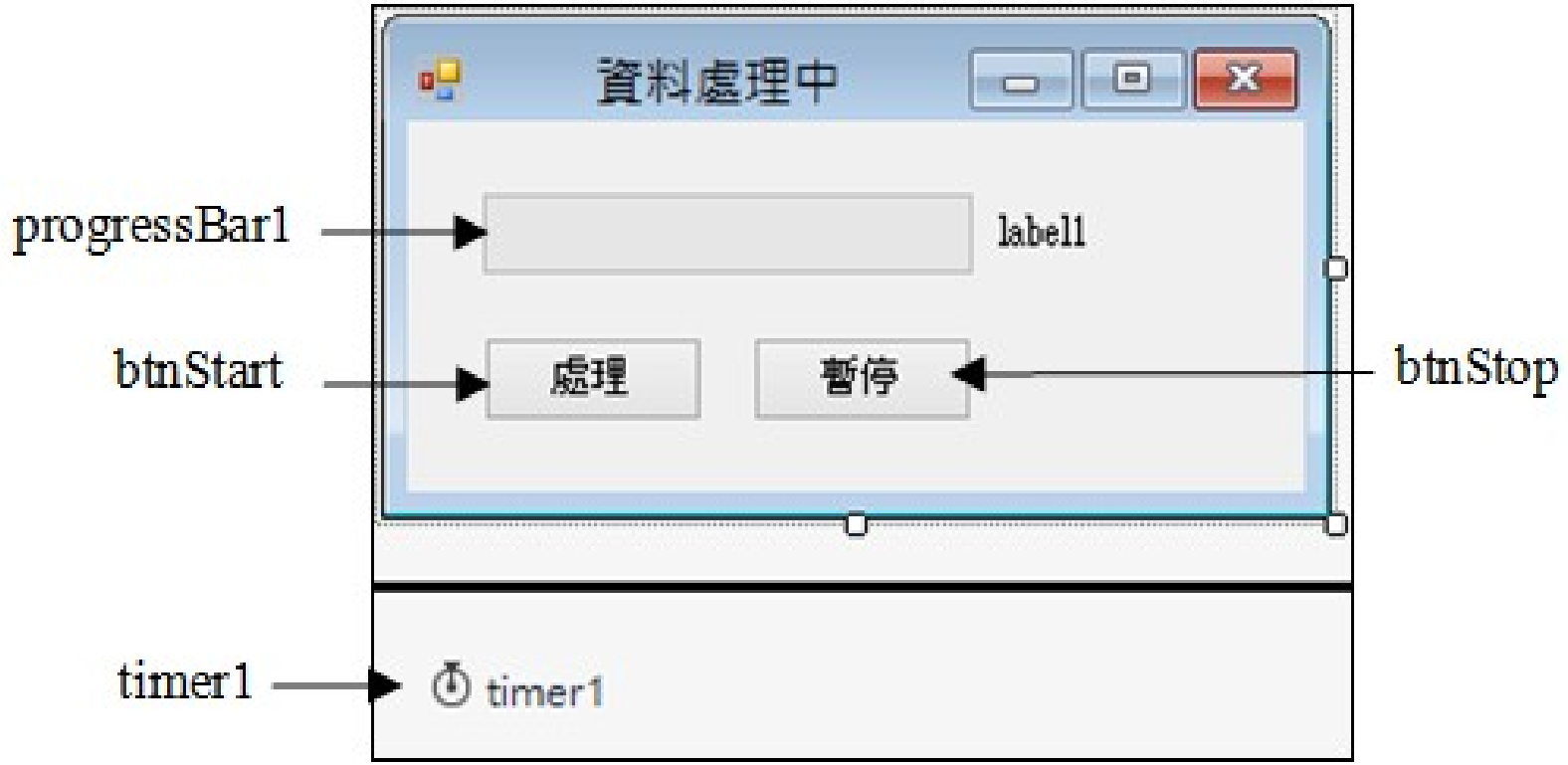
3.Press “處理” button to start data process, label1 shows the progress from 0% ~ 100%. Suspend the process when “暫停” button is pressed.

Result:



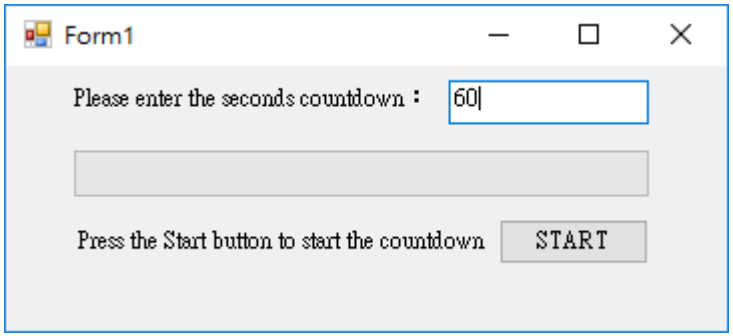


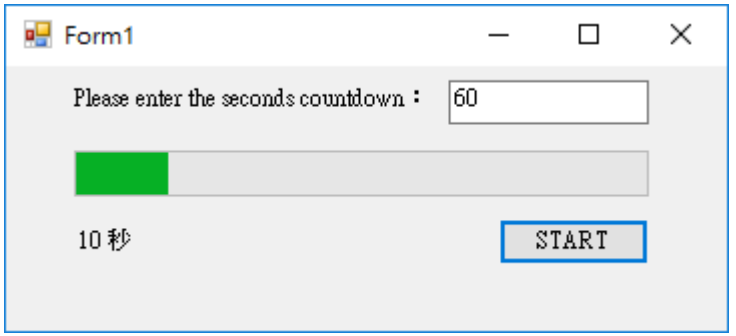
Design User Interface

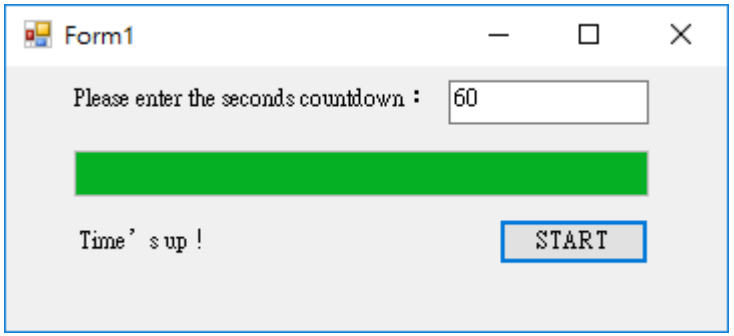


Practice9.1: countdown-timer program

- **Design a countdown-timer program with the following requirements:**
- **After inputting the countdown seconds, press the "Start" button to launch the seconds monitor. The progress bar will also be displayed at the same time.**
- **At the end of the final countdown, the message "Time's up!" pops out.**







The End