

(1 번)

```
import wx

app = wx.App()

frame = wx.Frame(parent=None, title="Welcome")
frame.Show()

app.MainLoop()
```

(2 번)

```
import wx

class MyApp(wx.App) :
    def OnInit(self) :
        frame = wx.Frame(parent=None, title="시작")
        frame.Show(True)
        return True

if __name__ == "__main__" :
    app = MyApp()
    app.MainLoop()
```

(3 번)

```
import wx

class MyFrame(wx.Frame) :
    def __init__(self) :
        wx.Frame.__init__(self, parent=None, title="Empty Window")

class MyApp(wx.App) :
    def OnInit(self) :
        frame = MyFrame()
        frame.Show(True)
        return True

if __name__ == "__main__" :
    app = MyApp()
    app.MainLoop()
```

(4 번)

```
import wx

class MyFrame(wx.Frame) :
    def __init__(self) :
        wx.Frame.__init__(self, parent=None, title="Empty Window")
        self.Bind(wx.EVT_CLOSE, self.OnCloseX)

    def OnCloseX(self, event):
        if wx.MessageBox("닫을래?", "확인", wx.YES_NO) != wx.YES :
            event.Skip(False) #event.Skip(True)
        else :
            self.Destroy()

class MyApp(wx.App) :
    def OnInit(self) :
        frame = MyFrame()
        frame.Show(True)
        return True

if __name__ == "__main__" :
    app = MyApp()
    app.MainLoop()
```

(5 번)

```
import wx

class MyFrame(wx.Frame) :
    def __init__(self) :
        wx.Frame.__init__(self, parent=None, title="Empty Window")
        self.Maximize(True)
        self.Bind(wx.EVT_CLOSE, self.OnCloseX)
        self.Bind(wx.EVT_LEFT_DOWN, self.OnMouseLButtonDown)
        self.Bind(wx.EVT_RIGHT_DOWN, self.OnMouseRButtonDown)

    def OnMouseLButtonDown(self, event) :
        self.SetWindowStyle(wx.RESIZE_BORDER | wx.CAPTION)
        self.SetSize(wx.Size(400, 200))
        self.SetBackgroundColour(wx.Colour(0,0,255,0))
        self.Refresh()

    def OnMouseRButtonDown(self, event) :
        self.SetWindowStyle(wx.DEFAULT_FRAME_STYLE)
        self.SetSize(wx.Size(200, 400))
        self.SetBackgroundColour(wx.Colour(255,0,0,0))
        self.Refresh()

    def OnCloseX(self, event):
        if wx.MessageBox("닫을래?", "확인", wx.YES_NO) != wx.YES :
            event.Skip(False)
        else :
            self.Destroy()

class MyApp(wx.App) :
    def OnInit(self) :
        frame = MyFrame()
        frame.Show(True)
        return True

if __name__ == "__main__" :
    app = MyApp()
    app.MainLoop()
```

(6 번)

```
import wx

class MyFrame(wx.Frame) :
    def __init__(self):
        wx.Frame.__init__(self, parent=None, title="Widget")

        btnClick = wx.Button(self, label="Click Me!")
        btnClick.Bind(wx.EVT_BUTTON, self.OnBtnClickMe)

    def OnBtnClickMe(self, event) :
        wx.MessageBox("내용", "제목", wx.OK)

class MyApp(wx.App) :
    def OnInit(self) :
        frame = MyFrame()
        frame.Show()
        return True

if __name__ == "__main__" :
    app = MyApp()
    app.MainLoop()
```

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```
# Panel / Sizer?
import wx

class MyFrame(wx.Frame) :
    def __init__(self):
        wx.Frame.__init__(self, parent=None, title="Panel")
        self.panel = wx.Panel(self)
        self.panel.SetBackgroundColour(wx.RED)

        self.button1 = wx.Button(self.panel, label="(50,50)")
        self.button1.SetPosition((50,50))

        self.button2 = wx.Button(self.panel, label="(250,100)")
        self.button2.SetPosition((250,100))

class MyApp(wx.App) :
    def OnInit(self) :
        frame = MyFrame()
        frame.Show()
        return True

if __name__ == "__main__" :
    app = MyApp()
    app.MainLoop()
```

(8 번)

```
import wx

class MyFrame(wx.Frame) :
    def __init__(self):
        wx.Frame.__init__(self, parent=None, title="BoxSizer")
        self.mainPanel = wx.Panel(self)
        self.upperPanel = wx.Panel(self.mainPanel)
        self.leftButton = wx.Button(self.upperPanel, label="left")
        self.rightButton = wx.Button(self.upperPanel, label="right")

        self.hzBoxSizer = wx.BoxSizer(wx.HORIZONTAL)
        self.hzBoxSizer.Add(self.leftButton, 2)
        self.hzBoxSizer.Add(self.rightButton, 1)
        self.upperPanel.SetSizer(self.hzBoxSizer)

        self.middleButton = wx.Button(self.mainPanel, label="mid")
        self.lowerButton = wx.Button(self.mainPanel, label="lower")

        self.vtBoxSizer = wx.BoxSizer(wx.VERTICAL)
        self.vtBoxSizer.Add(self.upperPanel, 0,
                             wx.ALIGN_LEFT|wx.TOP|wx.LEFT, 5)
        self.vtBoxSizer.Add(self.middleButton, 1,
                             wx.EXPAND|wx.ALL, 5)
        self.vtBoxSizer.Add(self.lowerButton, 0,
                             wx.ALIGN_RIGHT|wx.RIGHT|wx.BOTTOM, 5)

        self.mainPanel.SetSizer(self.vtBoxSizer)

class MyApp(wx.App) :
    def OnInit(self) :
        frame = MyFrame()
        frame.Show()
        return True

if __name__ == "__main__" :
    app = MyApp()
    app.MainLoop()
```



(9 번)

```
import wx

class MyFrame(wx.Frame) :
    def __init__(self):
        wx.Frame.__init__(self, parent=None, title="BoxSizer")
        self.mainPanel = wx.Panel(self)
        self.upperPanel = wx.Panel(self.mainPanel)
        self.leftButton = wx.Button(self.upperPanel, label="left")
        self.rightButton = wx.Button(self.upperPanel, label="right")

        self.hzBoxSizer = wx.StaticBoxSizer(wx.HORIZONTAL,
            self.upperPanel, "UPPER")
        self.hzBoxSizer.Add(self.leftButton,2)
        self.hzBoxSizer.Add(self.rightButton,1)
        self.upperPanel.SetSizer(self.hzBoxSizer)

        self.middleButton = wx.Button(self.mainPanel, label="mid")
        self.lowerButton = wx.Button(self.mainPanel, label="lower")

        self.vtBoxSizer = wx.BoxSizer(wx.VERTICAL)
        self.vtBoxSizer.Add(self.upperPanel, 0,
            wx.ALIGN_LEFT|wx.TOP|wx.LEFT,5)
        self.vtBoxSizer.Add(self.middleButton, 1,
            wx.EXPAND|wx.ALL, 5)
        self.vtBoxSizer.Add(self.lowerButton, 0,
            wx.ALIGN_RIGHT|wx.RIGHT|wx.BOTTOM, 5)

        self.mainPanel.SetSizer(self.vtBoxSizer)

class MyApp(wx.App) :
    def OnInit(self) :
        frame = MyFrame()
        frame.Show()
        return True

if __name__ == "__main__" :
    app = MyApp()
    app.MainLoop()
```

(10 번)

```
import wx

class MyFrame(wx.Frame) :
    def __init__(self):
        wx.Frame.__init__(self, parent=None, title="GridSizer")
        self.SetSize(300,170)
        self.mainPanel = wx.Panel(self)
        self.gridSizer = wx.GridSizer(rows=4, cols=3, hgap=1, vgap=1)
        self.buttons = (
            wx.Button(self.mainPanel, label="1"),
            wx.Button(self.mainPanel, label="2"),
            wx.Button(self.mainPanel, label="3"),
            wx.Button(self.mainPanel, label="4"),
            wx.Button(self.mainPanel, label="5"),
            wx.Button(self.mainPanel, label="6"),
            wx.Button(self.mainPanel, label="7"),
            wx.Button(self.mainPanel, label="8"),
            wx.Button(self.mainPanel, label="9"),
            wx.Button(self.mainPanel, label="*"),
            wx.Button(self.mainPanel, label="0"),
            wx.Button(self.mainPanel, label="#"))

        for button in self.buttons :
            self.gridSizer.Add(button, 0, wx.EXPAND)

        self.vtBoxSizer = wx.BoxSizer(wx.VERTICAL)
        self.vtBoxSizer.Add(self.gridSizer, 1, wx.EXPAND|wx.ALL, 5)
        self.mainPanel.SetSizer(self.vtBoxSizer)

class MyApp(wx.App) :
    def OnInit(self):
        frame = MyFrame()
        frame.Show()
        return True

if __name__ == '__main__' :
    app = MyApp()
    app.MainLoop()
```

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```
import wx

class MyFrame(wx.Frame):
    def __init__(self):
        wx.Frame.__init__(self, parent=None, title="FlexGridSize")
        self.SetSize(300,170)
        self.mainPanel = wx.Panel(self)
        self.fgridSizer = wx.FlexGridSizer(rows=3,cols=2,hgap=2,vgap=2)

        self.stName = wx.StaticText(self.mainPanel, label="이름")
        self.stEmail = wx.StaticText(self.mainPanel, label="전자우편")
        self.stPhone = wx.StaticText(self.mainPanel, label="전화번호")
        self.tcName = wx.TextCtrl(self.mainPanel)
        self.tcEmail = wx.TextCtrl(self.mainPanel)
        self.tcPhone = wx.TextCtrl(self.mainPanel)

        self.fgridSizer.Add(self.stName)
        self.fgridSizer.Add(self.tcName, 0, wx.EXPAND)
        self.fgridSizer.Add(self.stEmail)
        self.fgridSizer.Add(self.tcEmail, 0, wx.EXPAND)
        self.fgridSizer.Add(self.stPhone)
        self.fgridSizer.Add(self.tcPhone, 0, wx.EXPAND)

        self.fgridSizer.AddGrowableCol(1)
        self.fgridSizer.AddGrowableRow(2)
        self.vvBoxSizer = wx.BoxSizer(wx.VERTICAL)
        self.vvBoxSizer.Add(self.fgridSizer, 1, wx.EXPAND|wx.ALL, 5)
        self.mainPanel.SetSizer(self.vvBoxSizer)

class MyApp(wx.App) :
    def OnInit(self):
        frame = MyFrame()
        frame.Show()
        return True

if __name__ == '__main__' :
    app = MyApp()
    app.MainLoop()
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