Laboratorium **Programowanie w języku Python 2** Wydział Elektrotechniki Automatyki I Informatyki Politechnika Świętokrzyska	
Studia: **Stacionarne I stopnia**	Kierunek: **Informatyka**
Data wykonania: **22.04.2021**	Grupa: **3ID16B**
Imię I nazwisko: **Arkadiusz Więcław**	Temat ćwiczenia: **Programowanie GUI** **Biblioteka wxPython**

Zad 1:

```
import wx


def example1():
    """
    Przykład tworzy proste okno z tytulem.
    """
    app = wx.App()
    frame = wx.Frame(parent=None, title='Przklad 1 =')
    frame.Show()
    app.MainLoop()


def example2():
    """
    Przykład tworzy proste okno o zdefinowanym rozmiarze i tytulem.
    """
    app = wx.App()
    frame = wx.Frame(parent=None, title='Przklad 2 =')
    frame.SetDimensions(0, 0, 900, 700)
    frame.Show()
    app.MainLoop()


def example3():
    """
    Przykład  tworzy proste okno za pomoca wlasnej klasy MyFrame.
    """

    class MyFrame(wx.Frame):
        def __init__(self):
            super().__init__(parent=None, title='Przklad 3 =')
            self.SetDimensions(0, 0, 500, 200)
            self.Show()

    app = wx.App()
    frame = MyFrame()
    app.MainLoop()
```

```
def example4():
    """
    Przykład tworzy proste okno z polem tekstowym i przyciskiem.
    """

    class MyFrame(wx.Frame):
        def __init__(self):
            super().__init__(parent=None, title='Przyklad 4 =')
            self.SetDimensions(0, 0, 500, 200)
            panel = wx.Panel(self)
            self.text_ctrl = wx.TextCtrl(panel, pos=(5, 1))
            self.text_ctrl2 = wx.TextCtrl(panel, pos=(5, 10))
            self.text_ctrl3 = wx.TextCtrl(panel, pos=(5, 30))
            my_btn = wx.Button(panel, label='Press Me', pos=(5, 120))
            self.Show()

    app = wx.App()
    frame = MyFrame()
    app.MainLoop()


def example5():
    """
    Przykład tworzy proste okno z przyciskiem który po klikniecIu wyswietla
napis w terminalu.
    """

    def onButton(event):
        print("Nie")

    def onButton2(event):
        print("Tez Nie")

    app = wx.App()
    frame = wx.Frame(None, -1, 'win.py')
    frame.SetSize(0, 0, 200, 200)
    panel = wx.Panel(frame, wx.ID_ANY)
    button = wx.Button(panel, wx.ID_ANY, 'Przycisk1', (10, 10))
    button.Bind(wx.EVT_BUTTON, onButton)
    button2 = wx.Button(panel, wx.ID_ANY, 'Przycisk2', (10, 40))
    button2.Bind(wx.EVT_BUTTON, onButton2)
    frame.Show()
    frame.Centre()
    app.MainLoop()
```

```
def example6():
    """
    Przykład tworzy proste okno z polem i przyciskiem ktory po kliknieciu
    wyswietla napis wraz z polem.
    """

    class MyFrame(wx.Frame):
        def __init__(self):
            super().__init__(parent=None, title='Hello World')
            panel = wx.Panel(self)
            self.text_ctrl = wx.TextCtrl(panel, pos=(5, 5), size=(200, 33))
            self.my_btn = wx.Button(panel, label='Press Me', pos=(5, 100))
            self.my_btn = wx.Button(panel, label='Hell no!', pos=(5, 150))

            def onButton(event):
                print("Button pressed")
                print(self.text_ctrl.GetSize())
                self.text_ctrl.AppendText("Button pressed\n")

            self.my_btn.Bind(wx.EVT_BUTTON, onButton)
            self.Show()

    if __name__ == '__main__':
        app = wx.App()
        frame = MyFrame()
        app.MainLoop()


def example7():
    """
    Przykład tworzy okno z kontenerem BoxSizer w którym znajduje się przycisk
i pole tekstowe.
    """

    class MyFrame(wx.Frame):
        def __init__(self):
            super().__init__(parent=None, title='Hello World')
            panel = wx.Panel(self)
            my_sizer = wx.BoxSizer(wx.VERTICAL)
            self.text_ctrl = wx.TextCtrl(panel)
            my_sizer.Add(self.text_ctrl, 0, wx.ALL | wx.EXPAND, 5)
            my_btn = wx.Button(panel, label='Press Me')
            my_btn2 = wx.Button(panel, label='Hell no!')
            my_sizer.Add(my_btn, 0, wx.ALL | wx.CENTER, 5)
            my_sizer.Add(my_btn2, 0, wx.ALL | wx.CENTER, 5)
```

```
            panel.SetSizer(my_sizer)
            self.Show()

    if __name__ == '__main__':
        app = wx.App()
        frame = MyFrame()
        app.MainLoop()


def example8():
    """
    Przykład tworzy okno z wykorzystaniem kontenera BoxSizer w który znajduje
się pola tekstowe i
    przycisk.
    """

    class MyFrame(wx.Frame):
        def __init__(self):
            super().__init__(parent=None, title='Hello World')
            panel = wx.Panel(self)
            my_sizer = wx.BoxSizer(wx.VERTICAL)
            self.text_ctrl = wx.TextCtrl(panel)
            my_sizer.Add(self.text_ctrl, 0, wx.ALL | wx.EXPAND, 5)

            my_btn = wx.Button(panel, label='Press 1')
            my_btn.Bind(wx.EVT_BUTTON, self.on_press)
            my_sizer.Add(my_btn, 0, wx.ALL | wx.CENTER, 5)
            self.text_ctrl_out = wx.TextCtrl(panel)

            my_btn2 = wx.Button(panel, label='Hell no!')
            my_btn2.Bind(wx.EVT_BUTTON, self.on_press2)
            my_sizer.Add(my_btn2, 0, wx.ALL | wx.CENTER, 10)

            my_sizer.Add(self.text_ctrl_out, 0, wx.ALL | wx.EXPAND, 5)
            panel.SetSizer(my_sizer)
            self.Show()

        def on_press(self, event):
            value = self.text_ctrl.GetValue()
            if not value:
                print("You didn't enter anything!")
            else:
                print("You typed: {}", format(value))
                self.text_ctrl_out.AppendText(value)

        def on_press2(self, event):
```

```
            value = self.text_ctrl.GetValue()
            if not value:
                print("You didn't enter anything!")
            else:
                print("You typed: {}", format(value))
                self.text_ctrl_out.AppendText(value)

    if __name__ == '__main__':
        app = wx.App()
        frame = MyFrame()
        app.MainLoop()


def example9():
    """
    Przykład tworzy okno w którym znajduje się proste linie.
    """

    class Example(wx.Frame):
        def __init__(self, *args, **kw):
            super(Example, self).__init__(*args, **kw)
            self.InitUI()

        def InitUI(self):
            wx.CallLater(2000, self.DrawLine)
            wx.CallLater(4000, self.DrawLine2)
            self.Centre()

        def DrawLine(self):
            dc = wx.ClientDC(self)
            dc.DrawLine(50, 60, 190, 60)

        def DrawLine2(self):
            dc = wx.ClientDC(self)
            dc.DrawLine(60, 70, 200, 70)

    def main():
        app = wx.App()
        example = Example(None)
        example.Show()
        app.MainLoop()

    main()


def example10():
```

```
"""
Przykład tworzy okno w którym znajduje się kwadraty o rożnych kolorach.
"""

class Example(wx.Frame):
    def __init__(self, *args, **kw):
        super(Example, self).__init__(*args, **kw)
        self.InitUI()

    def InitUI(self):
        self.Bind(wx.EVT_PAINT, self.OnPaint)
        self.SetTitle("Przyklad 10")
        self.SetDimensions(0, 0, 400, 420)
        self.Centre()

    def OnPaint(self, e):
        dc = wx.PaintDC(self)
        dc.SetPen(wx.Pen('#d4d4d4'))
        dc.SetBrush(wx.Brush('#c56c00'))
        dc.DrawRectangle(10, 15, 90, 60)
        dc.SetBrush(wx.Brush('#1ac500'))
        dc.DrawRectangle(130, 15, 90, 60)
        dc.SetBrush(wx.Brush('#539e47'))
        dc.DrawRectangle(250, 15, 90, 60)
        dc.SetBrush(wx.Brush('#004fc5'))
        dc.DrawRectangle(10, 105, 90, 60)
        dc.SetBrush(wx.Brush('#c50024'))
        dc.DrawRectangle(130, 105, 90, 60)
        dc.SetBrush(wx.Brush('#9e4757'))
        dc.DrawRectangle(250, 105, 90, 60)
        dc.SetBrush(wx.Brush('#5f3b00'))
        dc.DrawRectangle(10, 195, 90, 60)
        dc.SetBrush(wx.Brush('#4c4c4c'))
        dc.DrawRectangle(130, 195, 90, 60)
        dc.SetBrush(wx.Brush('#785f36'))
        dc.DrawRectangle(250, 195, 90, 60)
        dc.SetBrush(wx.Brush('#785f77'))
        dc.DrawRectangle(250, 275, 90, 60)
        dc.SetBrush(wx.Brush('#805f33'))
        dc.DrawRectangle(10, 275, 90, 60)
        dc.SetBrush(wx.Brush('#781f36'))
        dc.DrawRectangle(130, 275, 90, 60)

def main():
    app = wx.App()
    ex = Example(None)
```

```
        ex.Show()
        app.MainLoop()

    if __name__ == '__main__':
        main()


def example11():
    """
    Przykład tworzy okno w ktorym znajduje sie kolo o kolorze czerwonym ,
linie i kwadrat
    Dodalem drugi kwadraw
    """

    class Mywin(wx.Frame):
        def __init__(self, parent, title):
            super(Mywin, self).__init__(parent, title=title, size=(500, 300))
            self.InitUI()

        def InitUI(self):
            self.Bind(wx.EVT_PAINT, self.OnPaint)
            self.Centre()
            self.Show(True)

        def OnPaint(self, e):
            dc = wx.PaintDC(self)
            brush = wx.Brush("white")
            dc.SetBackground(brush)
            dc.Clear()
            # dc.DrawBitmap(wx.Bitmap("python.jpg"),10,10,True)
            color = wx.Colour(255, 0, 0)
            b = wx.Brush(color)
            dc.SetBrush(b)
            dc.DrawCircle(300, 125, 50)
            dc.SetBrush(wx.Brush(wx.Colour(255, 255, 255)))
            dc.DrawCircle(300, 125, 30)
            font = wx.Font(18, wx.ROMAN, wx.ITALIC, wx.NORMAL)
            dc.SetFont(font)
            dc.DrawText("Hello wxPython", 200, 10)
            pen = wx.Pen(wx.Colour(0, 0, 255))
            dc.SetPen(pen)
            dc.DrawLine(200, 50, 350, 50)
            dc.SetBrush(wx.Brush(wx.Colour(0, 255, 0), wx.CROSS_HATCH))
            dc.DrawRectangle(380, 15, 90, 60)
            dc.SetBrush(wx.Brush('#781f36'))
            dc.DrawRectangle(130, 30, 90, 60)
```

```
    ex = wx.App()
    Mywin(None, 'Drawing demo')
    ex.MainLoop()


def main():
    example1()
    example2()
    example3()
    example4()
    example5()
    example6()
    example7()
    example8()
    example9()
    example10()
    example11()


main()
```

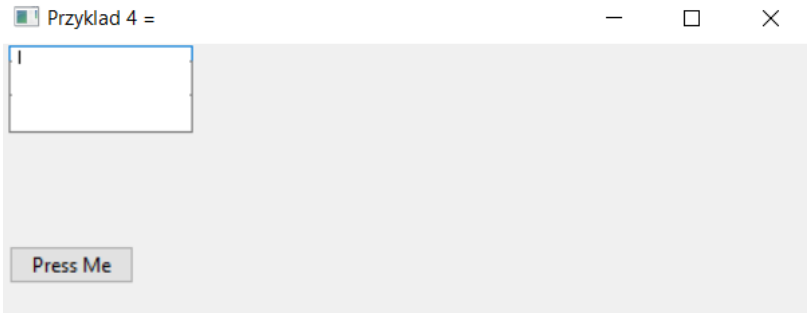
Wyniki:

Przyklad 1 =

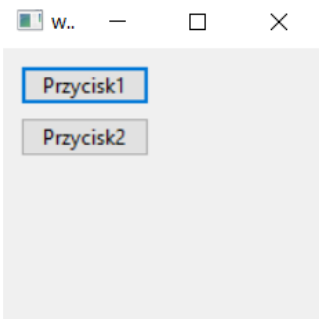
Przyklad 2 =

Przyklad 3 =

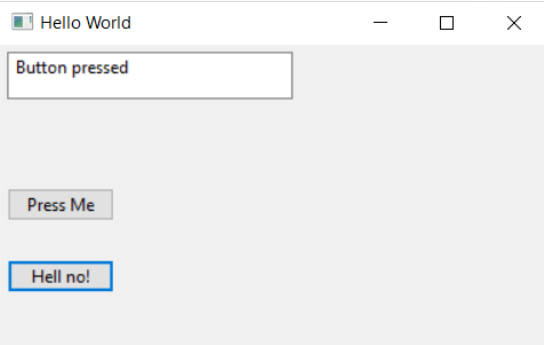
Przyklad 4 =



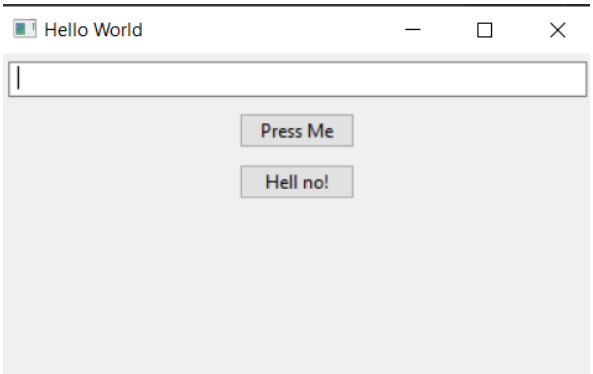
Przyklad 5 =



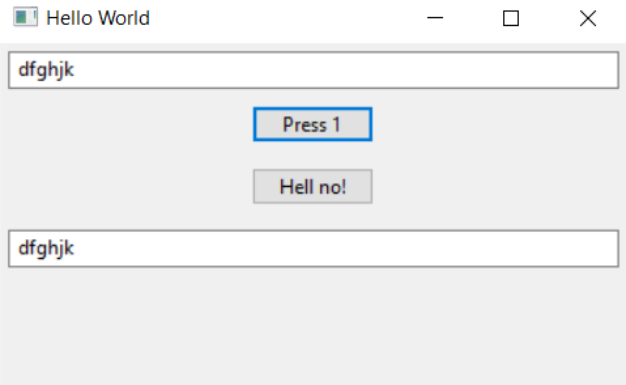
Przyklad 6 =



Przyklad 7 =

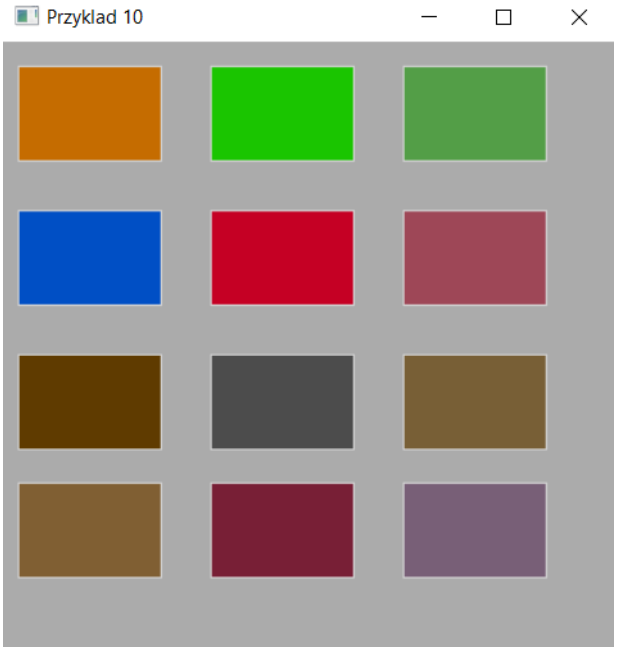


Przyklad 8 =

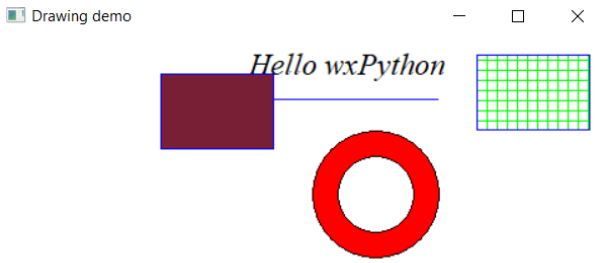


Przyklad 9 =

Przyklad 10 =

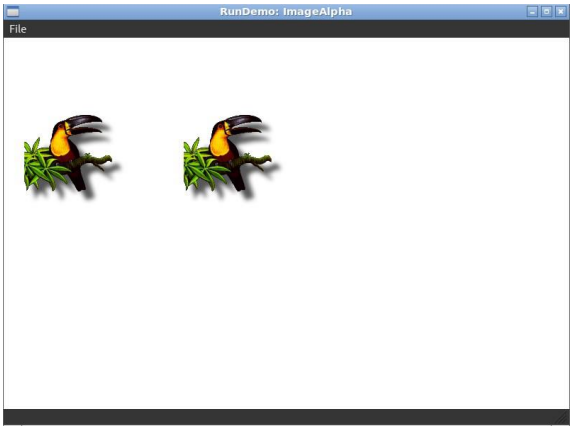


Przyklad 11 =

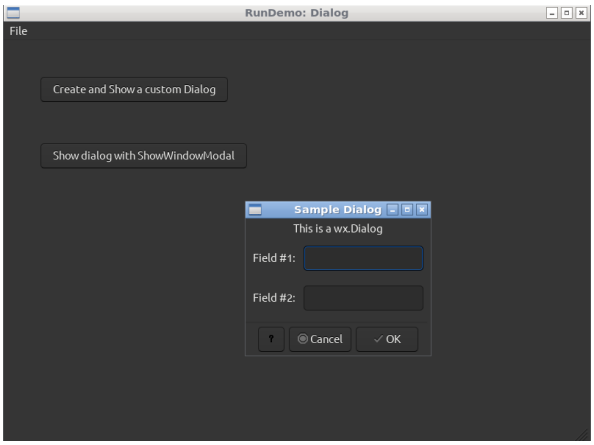


Zad 2:

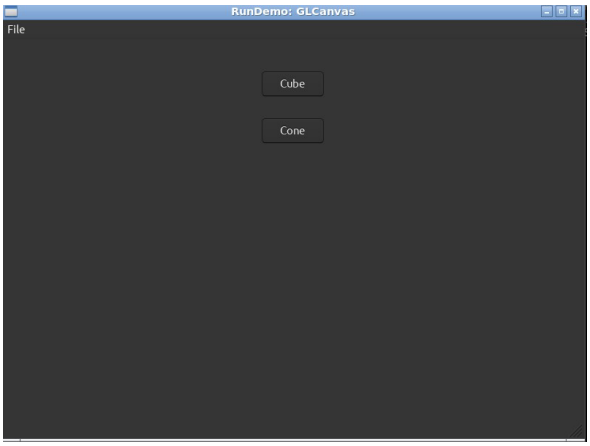
Przyklad 1 =



Przyklad 2 =



Przyklad 3 =



Zad 3:

```
# -*- coding: utf-8 -*-

###########################################################################
## Python code generated with wxFormBuilder (version Oct 26 2018)
## http://www.wxformbuilder.org/
##
## PLEASE DO *NOT* EDIT THIS FILE!
###########################################################################

import wx
import wx.xrc

###########################################################################
## Class MyFrame1
###########################################################################

class MyFrame1 ( wx.Frame ):

   def __init__( self, parent ):
      wx.Frame.__init__ ( self, parent, id = wx.ID_ANY, title =
wx.EmptyString, pos = wx.DefaultPosition, size = wx.Size( 500,300 ),
style = wx.DEFAULT_FRAME_STYLE|wx.TAB_TRAVERSAL )

      self.SetSizeHints( wx.DefaultSize, wx.DefaultSize )

      bSizer1 = wx.BoxSizer( wx.VERTICAL )

      self.m_staticText1 = wx.StaticText( self, wx.ID_ANY, u"Podaj
nazwe uzytkownika:", wx.DefaultPosition, wx.DefaultSize, 0 )
      self.m_staticText1.Wrap( -1 )

      bSizer1.Add( self.m_staticText1, 0, wx.ALL, 5 )

      self.m_textCtrl3 = wx.TextCtrl( self, wx.ID_ANY, wx.EmptyString,
wx.DefaultPosition, wx.DefaultSize, 0 )
      bSizer1.Add( self.m_textCtrl3, 0, wx.ALL, 5 )
```

```
        self.m_staticText2 = wx.StaticText( self, wx.ID_ANY, u"Podaj
nazwe haslo:", wx.DefaultPosition, wx.DefaultSize, 0 )
        self.m_staticText2.Wrap( -1 )

        bSizer1.Add( self.m_staticText2, 0, wx.ALL, 5 )

        self.m_textCtrl4 = wx.TextCtrl( self, wx.ID_ANY, wx.EmptyString,
wx.DefaultPosition, wx.DefaultSize, 0 )
        bSizer1.Add( self.m_textCtrl4, 0, wx.ALL, 5 )

        self.m_button2 = wx.Button( self, wx.ID_ANY, u"OK",
wx.DefaultPosition, wx.DefaultSize, 0 )
        bSizer1.Add( self.m_button2, 0, wx.ALL, 5 )


        self.SetSizer( bSizer1 )
        self.Layout()

        self.Centre( wx.BOTH )

        # Connect Events
        self.m_button2.Bind( wx.EVT_BUTTON, self.OnOKClick )

    def __del__( self ):
        pass


    # Virtual event handlers, overide them in your derived class
    def OnOKClick( self, event ):
        event.Skip()
```

Wynik: