LAPORAN PRAKTIKUM

PEMROGRAMAN VISUAL

2023

Prepared By:

ALFA NASHIHA (200511007) TI20C

Aplikasi perhitungan menggunakan konsep **Object Oriented Programming** (OOP)

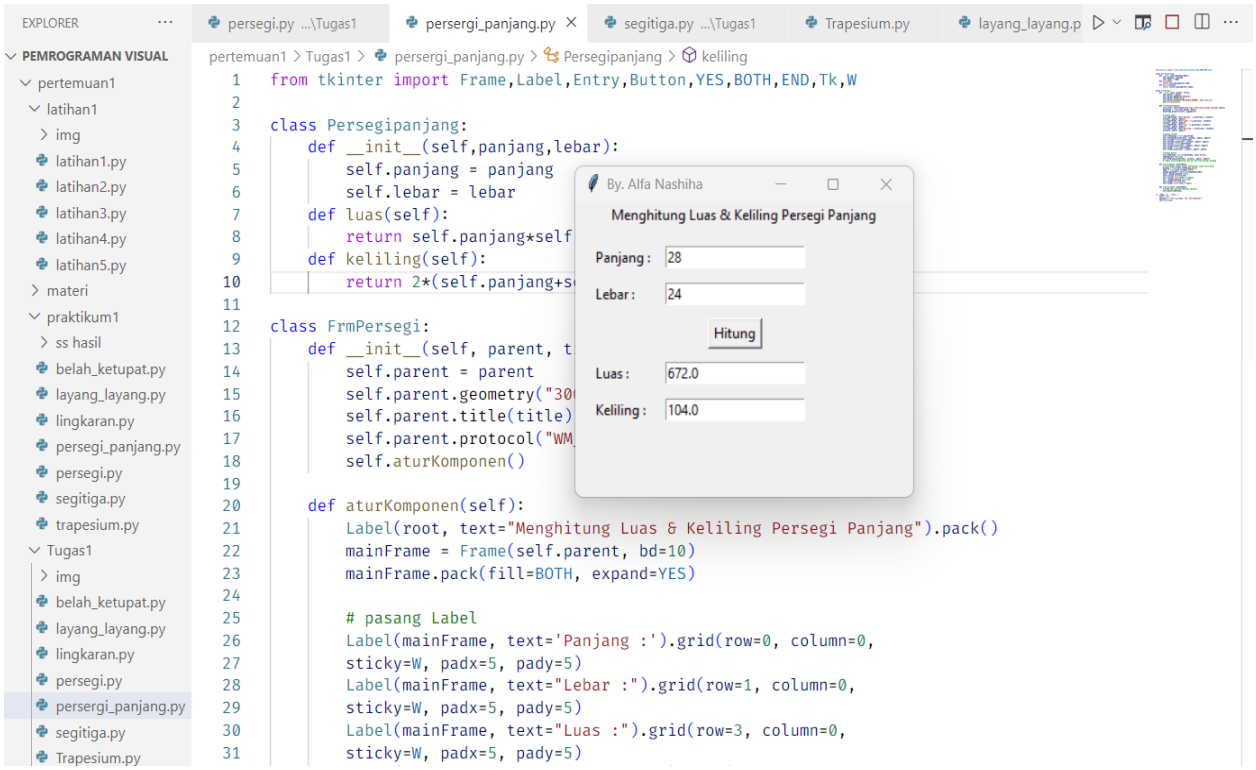
1. **Persegi Panjang**

   Source Code :

```
from tkinter import Frame,Label,Entry,Button,YES,BOTH,END,Tk,W

class Persegipanjang:
    def __init__(self,panjang,lebar):
        self.panjang = panjang
        self.lebar = lebar
    def luas(self):
        return self.panjang*self.lebar
    def keliling(self):
        return 2*(self.panjang+self.lebar)

class FrmPersegi:
    def __init__(self, parent, title):
        self.parent = parent
        self.parent.geometry("300x250")
        self.parent.title(title)
        self.parent.protocol("WM_DELETE_WINDOW", self.onKeluar)
        self.aturKomponen()

    def aturKomponen(self):
        Label(root, text="Menghitung Luas & Keliling Persegi
Panjang").pack()
        mainFrame = Frame(self.parent, bd=10)
        mainFrame.pack(fill=BOTH, expand=YES)

        # pasang Label
        Label(mainFrame, text='Panjang :').grid(row=0, column=0,
        sticky=W, padx=5, pady=5)
        Label(mainFrame, text="Lebar :").grid(row=1, column=0,
        sticky=W, padx=5, pady=5)
        Label(mainFrame, text="Luas :").grid(row=3, column=0,
        sticky=W, padx=5, pady=5)
        Label(mainFrame, text="Keliling :").grid(row=4, column=0,
        sticky=W, padx=5, pady=5)
```

```
        # pasang textbox
        self.txtPanjang = Entry(mainFrame)
        self.txtPanjang.grid(row=0, column=1, padx=5, pady=5)
        self.txtLebar = Entry(mainFrame)
        self.txtLebar.grid(row=1, column=1, padx=5, pady=5)
        self.txtLuas = Entry(mainFrame)
        self.txtLuas.grid(row=3, column=1, padx=5, pady=5)
        self.txtKel = Entry(mainFrame)
        self.txtKel.grid(row=4, column=1, padx=5, pady=5)

        # Pasang Button
        self.btnHitung = Button(mainFrame, text='Hitung',
        command=self.onHitung)
        self.btnHitung.grid(row=2, column=1, padx=5, pady=5)
        # fungsi untuk menghitung luas dan keliling persegi panjang

    def onHitung(self, event=None):
        # perhitungan dengan metode Pemrograman Tidak Terstruktur
        panjang = float(self.txtPanjang.get())
        lebar = float(self.txtLebar.get())
        pesegi_panjang=Persegipanjang(panjang,lebar)
        luas = pesegi_panjang.luas()
        self.txtLuas.delete(0,END)
        self.txtLuas.insert(END,str(luas))
        kel = pesegi_panjang.keliling()
        self.txtKel.delete(0,END)
        self.txtKel.insert(END,str(kel))

    def onKeluar(self, event=None):
        # memberikan perintah menutup aplikasi
        self.parent.destroy()

if __name__ == '__main__':
    root = Tk()
    aplikasi = FrmPersegi(root, "By. Alfa Nashiha")
    root.mainloop()
```

Hasil Program Persegi Panjang ;



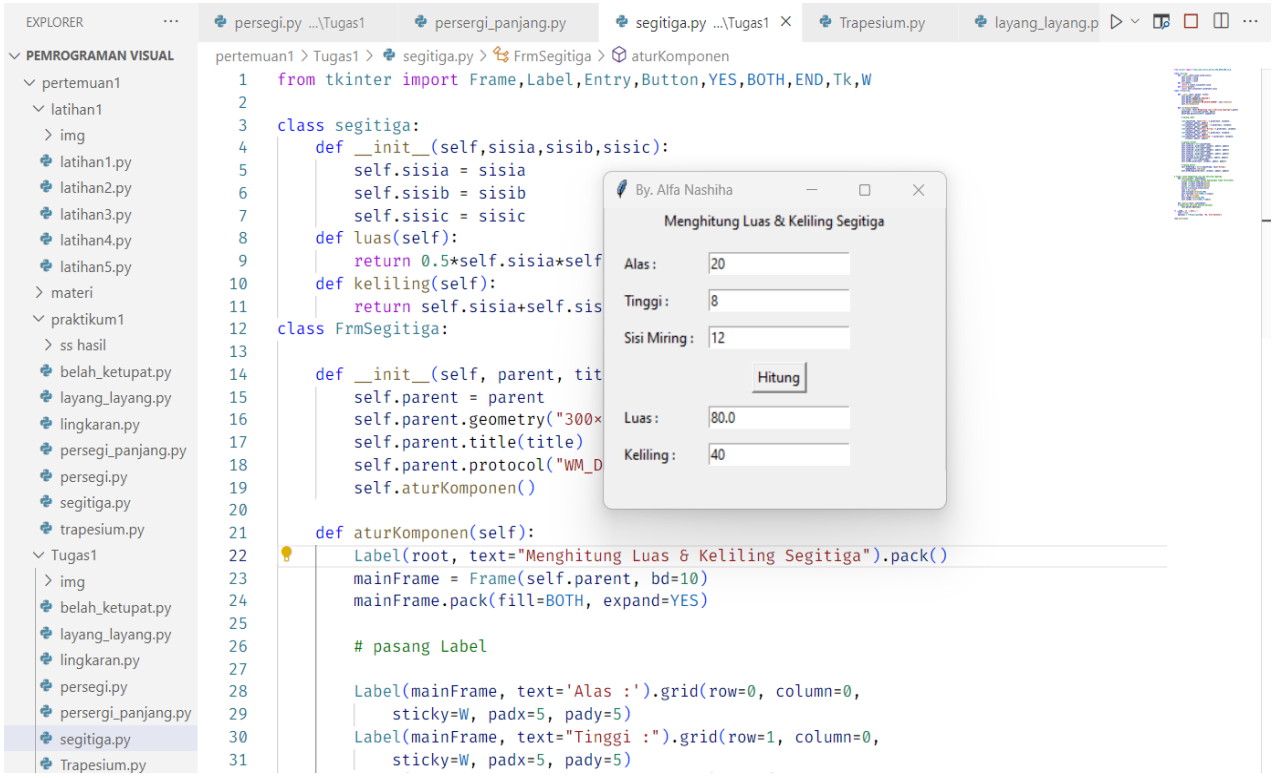
2. Segitiga

Source Code :

```
from tkinter import Frame,Label,Entry,Button,YES,BOTH,END,Tk,W

class segitiga:
    def __init__(self,sisia,sisib,sisic):
        self.sisia = sisia
        self.sisib = sisib
        self.sisic = sisic
    def luas(self):
        return 0.5*self.sisia*self.sisib
    def keliling(self):
        return self.sisia+self.sisib+self.sisic
class FrmSegitiga:

    def __init__(self, parent, title):
        self.parent = parent
        self.parent.geometry("300x250")
        self.parent.title(title)
        self.parent.protocol("WM_DELETE_WINDOW", self.onKeluar)
        self.aturKomponen()

    def aturKomponen(self):
        Label(root, text="Menghitung Luas & Keliling Belah Ketupat").pack()
        mainFrame = Frame(self.parent, bd=10)
        mainFrame.pack(fill=BOTH, expand=YES)

        # pasang Label

        Label(mainFrame, text='Alas :').grid(row=0, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text="Tinggi :").grid(row=1, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text="Sisi Miring :").grid(row=2, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text="Luas :").grid(row=4, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text="Keliling :").grid(row=5, column=0,
            sticky=W, padx=5, pady=5)
```

```
        # pasang textbox
        self.txtSisiA = Entry(mainFrame)
        self.txtSisiA .grid(row=0, column=1, padx=5, pady=5)
        self.txtSisiB = Entry(mainFrame)
        self.txtSisiB .grid(row=1, column=1, padx=5, pady=5)
        self.txtSisiC = Entry(mainFrame)
        self.txtSisiC .grid(row=2, column=1, padx=5, pady=5)
        self.txtLuasS = Entry(mainFrame)
        self.txtLuasS.grid(row=4, column=1, padx=5, pady=5)
        self.txtKel = Entry(mainFrame)
        self.txtKel.grid(row=5, column=1, padx=5, pady=5)

        # Pasang Button
        self.btnHitung = Button(mainFrame, text='Hitung',
            command=self.onHitung)
        self.btnHitung.grid(row=3, column=1, padx=5, pady=5)


# fungsi untuk menghitung luas dan keliling segitiga
    def onHitung(self, event=None):
        # perhitungan dengan metode Pemrograman Tidak Terstruktur
        sisia= int(self.txtSisiA.get())
        sisib= int(self.txtSisiB.get())
        sisic= int(self.txtSisiC.get())
        ks=segitiga(sisia,sisib,sisic)
        luas = ks.luas()
        self.txtLuasS.delete(0,END)
        self.txtLuasS.insert(END,str(luas))
        kel = ks.keliling()
        self.txtKel.delete(0,END)
        self.txtKel.insert(END,str(kel))

    def onKeluar(self, event=None):
    # memberikan perintah menutup aplikasi
        self.parent.destroy()

if __name__ == '__main__':
    root = Tk()
    aplikasi = FrmSegitiga(root, "By. Alfa Nashiha")

root.mainloop()
```

Hasil Program Segitiga ;



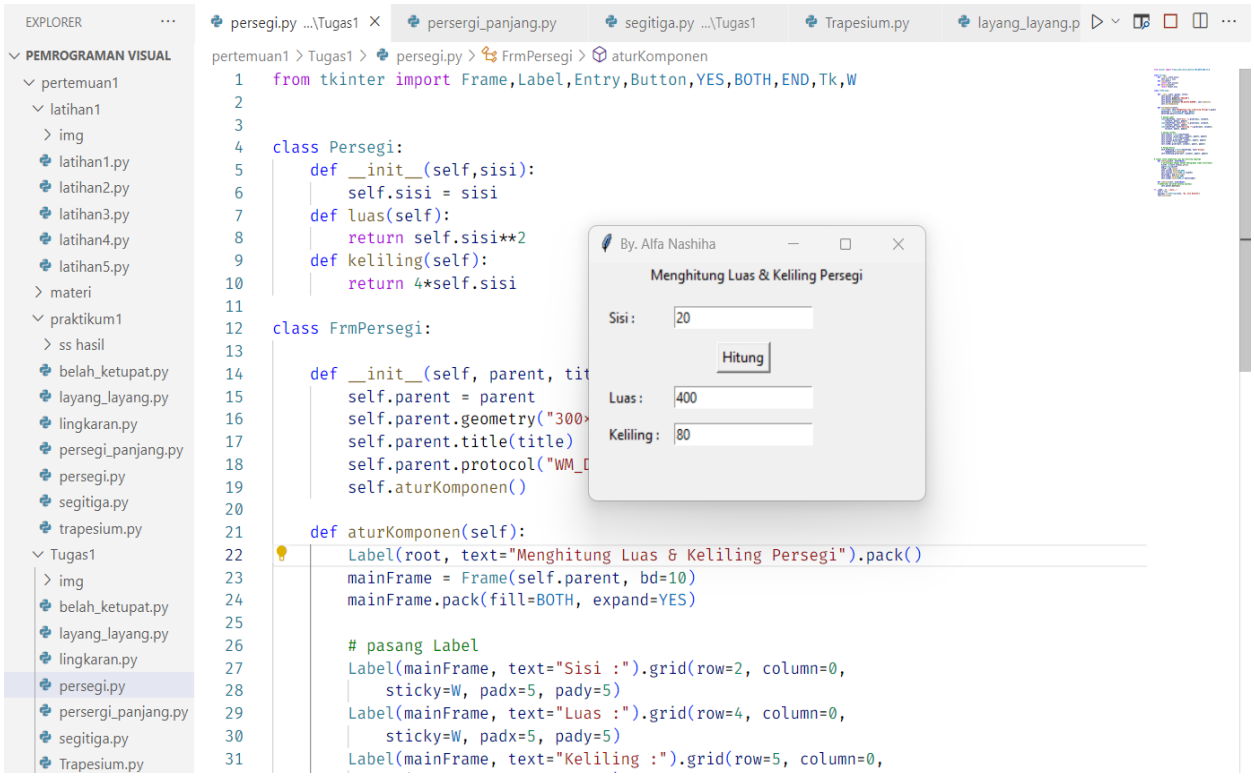
3. Persegi / Bujur Sangkar

Source Code ;

```
from tkinter import Frame,Label,Entry,Button,YES,BOTH,END,Tk,W


class Persegi:
    def __init__(self,sisi):
        self.sisi = sisi
    def luas(self):
        return self.sisi**2
    def keliling(self):
        return 4*self.sisi

class FrmPersegi:

    def __init__(self, parent, title):
        self.parent = parent
        self.parent.geometry("300x200")
        self.parent.title(title)
        self.parent.protocol("WM_DELETE_WINDOW", self.onKeluar)
        self.aturKomponen()

    def aturKomponen(self):
        Label(root, text="Menghitung Luas & Keliling Belah Ketupat").pack()
        mainFrame = Frame(self.parent, bd=10)
        mainFrame.pack(fill=BOTH, expand=YES)

        # pasang Label
        Label(mainFrame, text="Sisi :").grid(row=2, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text="Luas :").grid(row=4, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text="Keliling :").grid(row=5, column=0,
            sticky=W, padx=5, pady=5)

        # pasang textbox
        self.txtSisi = Entry(mainFrame)
        self.txtSisi .grid(row=2, column=1, padx=5, pady=5)
        self.txtLuas = Entry(mainFrame)
        self.txtLuas.grid(row=4, column=1, padx=5, pady=5)
        self.txtKel = Entry(mainFrame)
        self.txtKel.grid(row=5, column=1, padx=5, pady=5)
```

```
        # Pasang Button
        self.btnHitung = Button(mainFrame, text='Hitung',
            command=self.onHitung)
        self.btnHitung.grid(row=3, column=1, padx=5, pady=5)


# fungsi untuk menghitung luas dan keliling segitiga
    def onHitung(self, event=None):
        # perhitungan dengan metode Pemrograman Tidak Terstruktur
        SisiP= int(self.txtSisi.get())
        psg=Persegi(SisiP)
        luasP = psg.luas()
        self.txtLuas.delete(0,END)
        self.txtLuas.insert(END,str(luasP))
        kelilingP = psg.keliling()
        self.txtKel.delete(0,END)
        self.txtKel.insert(END,str(kelilingP))

    def onKeluar(self, event=None):
    # memberikan perintah menutup aplikasi
        self.parent.destroy()

if __name__ == '__main__':
    root = Tk()
    aplikasi = FrmPersegi(root, "By. Alfa Nashiha")
    root.mainloop()
```

Hasil Program Persegi / Bujur Sangkar :



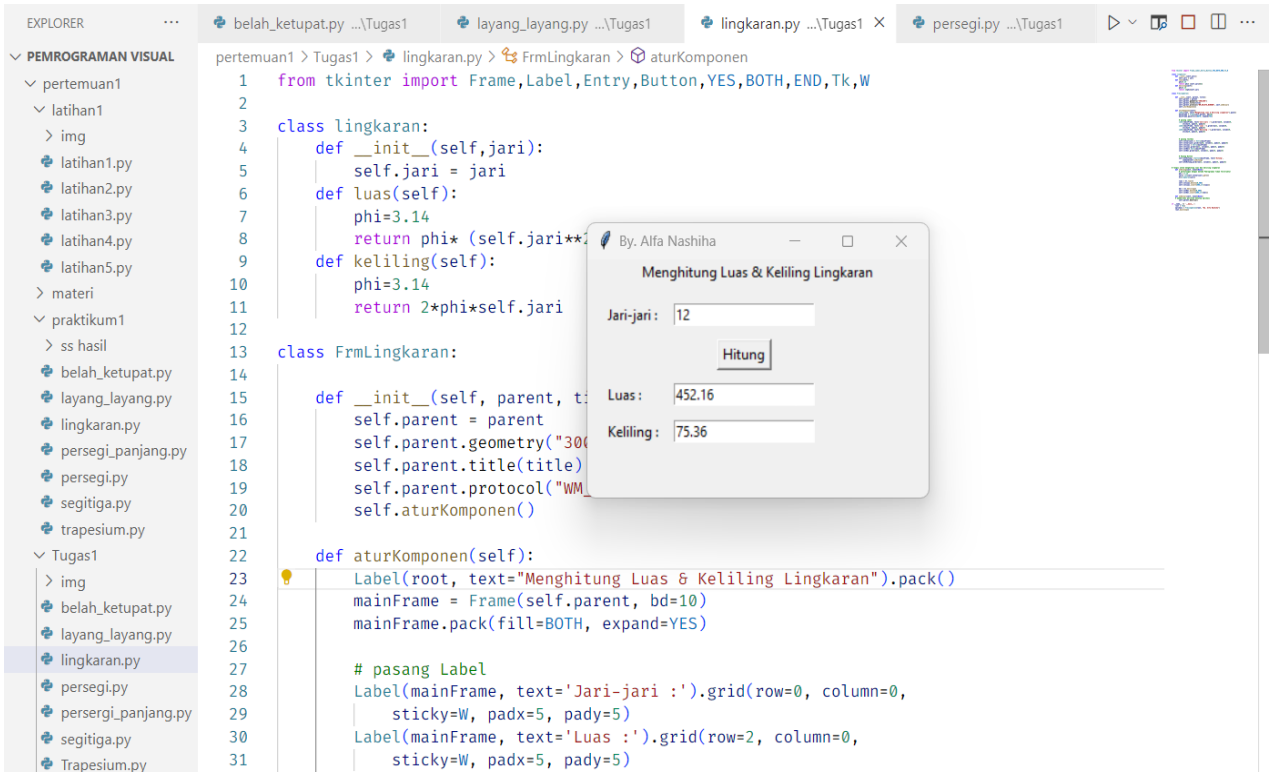
4. Lingkaran

Source Code :

```
from tkinter import Frame,Label,Entry,Button,YES,BOTH,END,Tk,W

class lingkaran:
    def __init__(self,jari):
        self.jari = jari
    def luas(self):
        phi=3.14
        return phi* (self.jari**2)
    def keliling(self):
        phi=3.14
        return 2*phi*self.jari

class FrmLingkaran:

    def __init__(self, parent, title):
        self.parent = parent
        self.parent.geometry("300x200")
        self.parent.title(title)
        self.parent.protocol("WM_DELETE_WINDOW", self.onKeluar)
        self.aturKomponen()

    def aturKomponen(self):
        Label(root, text="Menghitung Luas & Keliling Belah Ketupat").pack()
        mainFrame = Frame(self.parent, bd=10)
        mainFrame.pack(fill=BOTH, expand=YES)

        # pasang Label
        Label(mainFrame, text='Jari-jari :').grid(row=0, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text='Luas :').grid(row=2, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text='Keliling :').grid(row=3, column=0,
            sticky=W, padx=5, pady=5)



        # pasang textbox
        self.txtJarijari = Entry(mainFrame)
        self.txtJarijari.grid(row=0, column=1, padx=5, pady=5)
        self.txtLuas = Entry(mainFrame)
        self.txtLuas.grid(row=2, column=1, padx=5, pady=5)
        self.txtKel= Entry(mainFrame)
        self.txtKel.grid(row=3, column=1, padx=5, pady=5)
```

```
        # Pasang Button
        self.btnHitung = Button(mainFrame, text='Hitung',
            command=self.onHitung)
        self.btnHitung.grid(row=1, column=1, padx=5, pady=5)


# fungsi untuk menghitung luas dan keliling lingkaran
    def onHitung(self, event=None):
        # perhitungan dengan metode Pemrograman Tidak Terstruktur
        phi = 3.14
        jari= int(self.txtJarijari.get())
        kl=lingkaran(jari)

        luas = kl.luas()
        self.txtLuas.delete(0,END)
        self.txtLuas.insert(END,str(luas))

        kel = kl.keliling()
        self.txtKel.delete(0,END)
        self.txtKel.insert(END,str(kel))

    def onKeluar(self, event=None):
    # memberikan perintah menutup aplikasi
        self.parent.destroy()

if __name__ == '__main__':
    root = Tk()
    aplikasi = FrmLingkaran(root, "By. Alfa Nashiha")
    root.mainloop()
```

Hasil Program Lingkaran ;



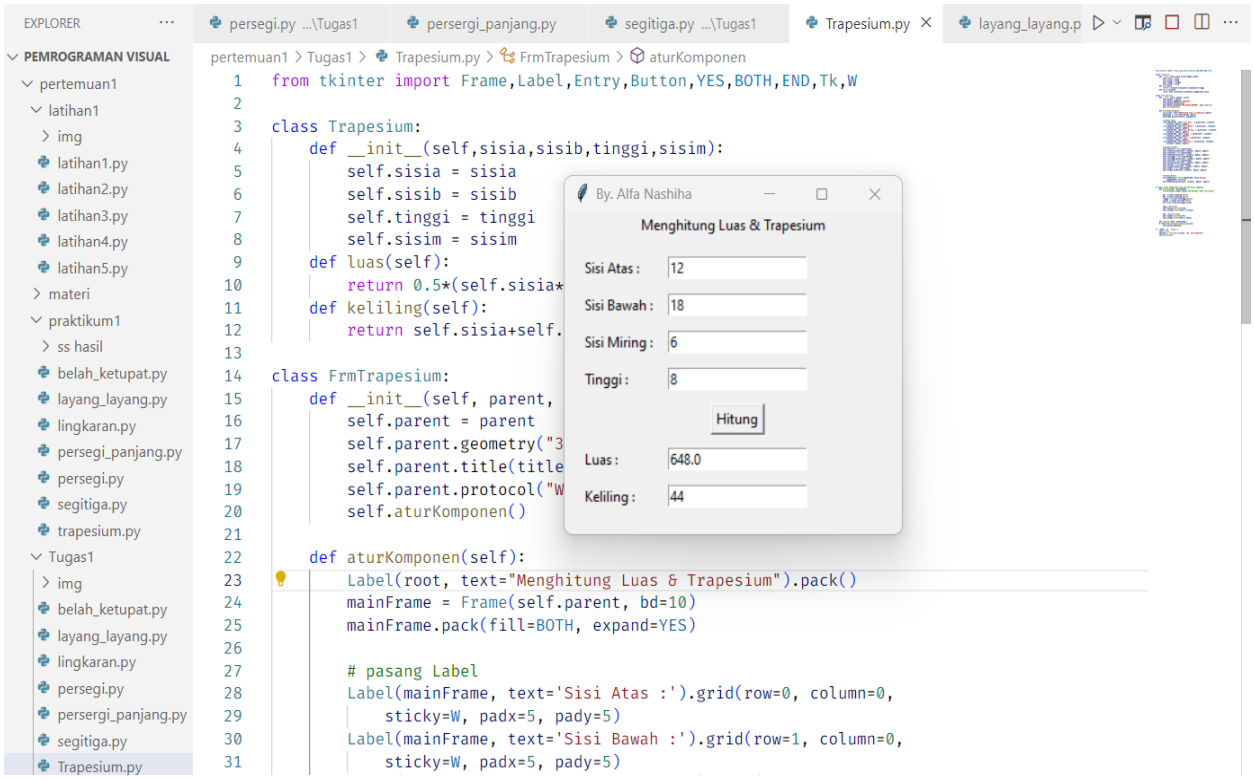
5. Trapesium

Source Code :

```
from tkinter import Frame,Label,Entry,Button,YES,BOTH,END,Tk,W

class Trapesium:
    def __init__(self,sisia,sisib,tinggi,sisim):
        self.sisia = sisia
        self.sisib = sisib
        self.tinggi = tinggi
        self.sisim = sisim
    def luas(self):
        return 0.5*(self.sisia*self.sisib)*self.tinggi
    def keliling(self):
        return self.sisia+self.sisib+self.tinggi+self.sisim

class FrmTrapesium:
    def __init__(self, parent, title):
        self.parent = parent
        self.parent.geometry("300x270")
        self.parent.title(title)
        self.parent.protocol("WM_DELETE_WINDOW", self.onKeluar)
        self.aturKomponen()

    def aturKomponen(self):
        Label(root, text="Menghitung Luas & Keliling Belah Ketupat").pack()
        mainFrame = Frame(self.parent, bd=10)
        mainFrame.pack(fill=BOTH, expand=YES)

        # pasang Label
        Label(mainFrame, text='Sisi Atas :').grid(row=0, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text='Sisi Bawah :').grid(row=1, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text='Sisi Miring :').grid(row=2, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text='Tinggi :').grid(row=3, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text='Luas :').grid(row=5, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text='Keliling :').grid(row=6, column=0,
            sticky=W, padx=5, pady=5)
```

```
        # pasang textbox
        self.txtSisiA = Entry(mainFrame)
        self.txtSisiA.grid(row=0, column=1, padx=5, pady=5)
        self.txtSisiB = Entry(mainFrame)
        self.txtSisiB.grid(row=1, column=1, padx=5, pady=5)
        self.txttinggi = Entry(mainFrame)
        self.txttinggi.grid(row=2, column=1, padx=5, pady=5)
        self.txtsisiM = Entry(mainFrame)
        self.txtsisiM.grid(row=3, column=1, padx=5, pady=5)
        self.txtLuas = Entry(mainFrame)
        self.txtLuas.grid(row=5, column=1, padx=5, pady=5)
        self.txtKel = Entry(mainFrame)
        self.txtKel.grid(row=6, column=1, padx=5, pady=5)


        # Pasang Button
        self.btnHitung = Button(mainFrame, text='Hitung',
            command=self.onHitung)
        self.btnHitung.grid(row=4, column=1, padx=5, pady=5)


# fungsi untuk menghitung luas dan keliling lingkaran
    def onHitung(self, event=None):
        # perhitungan dengan metode Pemrograman Tidak Terstruktur

        sA= int(self.txtSisiA.get())
        sB= int(self.txtSisiB.get())
        tinggi= int(self.txttinggi.get())
        sisim= int(self.txtsisiM.get())
        kt=Trapesium(sA,sB,tinggi,sisim)

        luas = kt.luas()
        self.txtLuas.delete(0,END)
        self.txtLuas.insert(END,str(luas))

        kel = kt.keliling()
        self.txtKel.delete(0,END)
        self.txtKel.insert(END,str(kel))

    def onKeluar(self, event=None):
    # memberikan perintah menutup aplikasi
        self.parent.destroy()

if __name__ == '__main__':
    root = Tk()
    aplikasi = FrmTrapesium(root, "By. Alfa Nashiha")
    root.mainloop()
```

Hasil Program Trapesium :



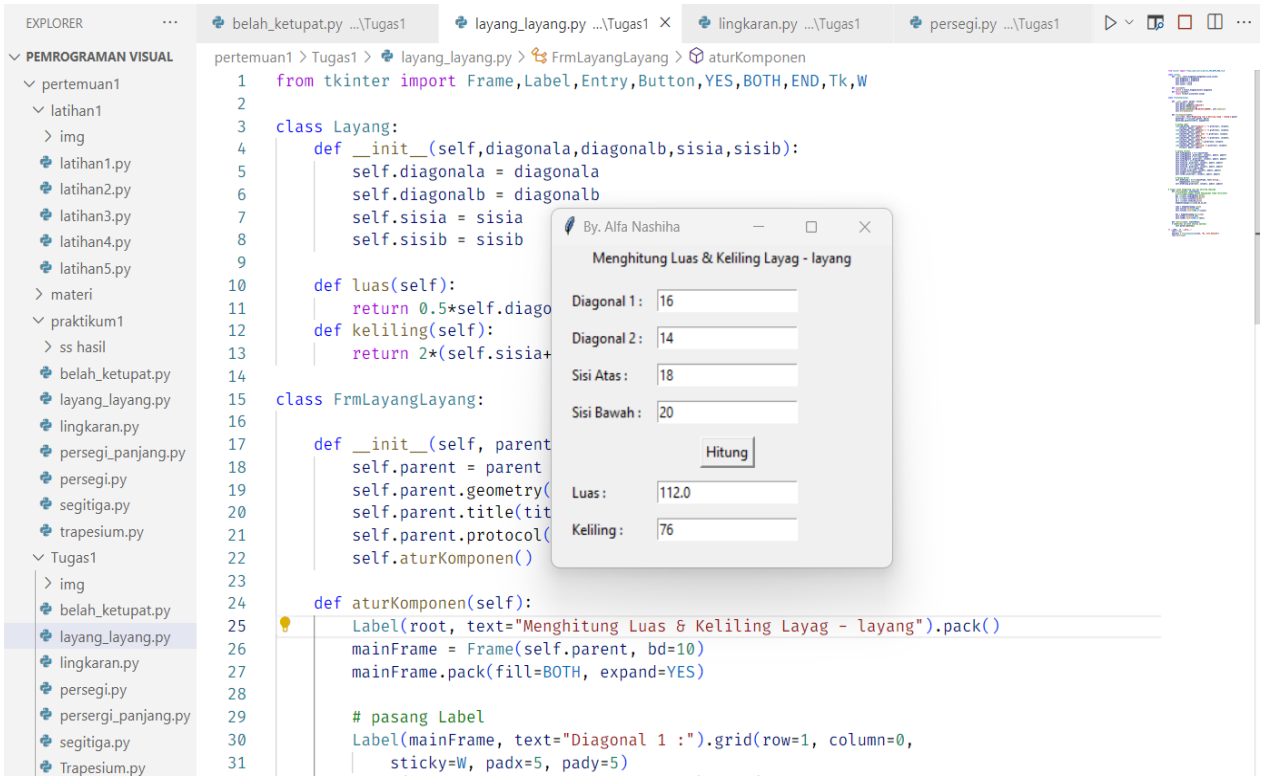
6. Layang-layang

Source Code ;

```
from tkinter import Frame,Label,Entry,Button,YES,BOTH,END,Tk,W

class Layang:
    def __init__(self,diagonala,diagonalb,sisia,sisib):
        self.diagonala = diagonala
        self.diagonalb = diagonalb
        self.sisia = sisia
        self.sisib = sisib

    def luas(self):
        return 0.5*self.diagonala*self.diagonalb
    def keliling(self):
        return 2*(self.sisia+self.sisib)

class FrmLayangLayang:

    def __init__(self, parent, title):
        self.parent = parent
        self.parent.geometry("300x270")
        self.parent.title(title)
        self.parent.protocol("WM_DELETE_WINDOW", self.onKeluar)
        self.aturKomponen()

    def aturKomponen(self):
        Label(root, text="Menghitung Luas & Keliling Belah Ketupat").pack()
        mainFrame = Frame(self.parent, bd=10)
        mainFrame.pack(fill=BOTH, expand=YES)

        # pasang Label
        Label(mainFrame, text="Diagonal 1 :").grid(row=1, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text="Diagonal 2 :").grid(row=2, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text="Sisi Atas :").grid(row=3, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text="Sisi Bawah :").grid(row=4, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text="Luas :").grid(row=6, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text="Keliling :").grid(row=7, column=0,
            sticky=W, padx=5, pady=5)
```

```
        # pasang textbox
        self.txtDiagonal1 = Entry(mainFrame)
        self.txtDiagonal1 .grid(row=1, column=1, padx=5, pady=5)
        self.txtDiagonal2 = Entry(mainFrame)
        self.txtDiagonal2 .grid(row=2, column=1, padx=5, pady=5)
        self.txtSisiA = Entry(mainFrame)
        self.txtSisiA .grid(row=3, column=1, padx=5, pady=5)
        self.txtSisiB = Entry(mainFrame)
        self.txtSisiB .grid(row=4, column=1, padx=5, pady=5)
        self.txtLuas = Entry(mainFrame)
        self.txtLuas.grid(row=6, column=1, padx=5, pady=5)
        self.txtKel= Entry(mainFrame)
        self.txtKel.grid(row=7, column=1, padx=5, pady=5)

        # Pasang Button
        self.btnHitung = Button(mainFrame, text='Hitung',
            command=self.onHitung)
        self.btnHitung.grid(row=5, column=1, padx=5, pady=5)


# fungsi untuk menghitung luas dan keliling segitiga
    def onHitung(self, event=None):
        # perhitungan dengan metode Pemrograman Tidak Terstruktur
        d1= int(self.txtDiagonal1.get())
        d2= int(self.txtDiagonal2.get())
        sa = int(self.txtSisiA.get())
        sb = int(self.txtSisiB.get())
        komponenlayang=Layang(d1,d2,sa,sb)

        luas = komponenlayang.luas()
        self.txtLuas.delete(0,END)
        self.txtLuas.insert(END,str(luas))

        kel = komponenlayang.keliling()
        self.txtKel.delete(0,END)
        self.txtKel.insert(END,str(kel))

    def onKeluar(self, event=None):
    # memberikan perintah menutup aplikasi
        self.parent.destroy()

if __name__ == '__main__':
    root = Tk()
    aplikasi = FrmLayangLayang(root, "By. Alfa Nashiha")
    root.mainloop()
```

Hasil Program Layang-layang :



7. Belah Ketupat

Source Code :

```
from tkinter import Frame,Label,Entry,Button,YES,BOTH,END,Tk,W

class BelahK:
    def __init__(self,diagonala,diagonalb,sisi):
        self.diagonala = diagonala
        self.diagonalb = diagonalb
        self.sisi = sisi
    def luas(self):
        return 0.5*self.diagonala*self.diagonalb
    def keliling(self):
        return 4*self.sisi

class FrmBelahketupat:
    def __init__(self, parent, title):
        self.parent = parent
        self.parent.geometry("300x250")
        self.parent.title(title)
        self.parent.protocol("WM_DELETE_WINDOW", self.onKeluar)
        self.aturKomponen()

    def aturKomponen(self):
        Label(root, text="Menghitung Luas & Keliling Belah Ketupat").pack()
        mainFrame = Frame(self.parent, bd=10)
        mainFrame.pack(fill=BOTH, expand=YES)

        # pasang Label
        Label(mainFrame, text='Diagonal 1 :').grid(row=0, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text='Diagonal 2 :').grid(row=1, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text='Sisi :').grid(row=2, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text='Luas :').grid(row=4, column=0,
            sticky=W, padx=5, pady=5)
        Label(mainFrame, text='Keliling :').grid(row=5, column=0,
            sticky=W, padx=5, pady=5)

        # pasang textbox
        self.txtDiagonal1 = Entry(mainFrame)
        self.txtDiagonal1.grid(row=0, column=1, padx=5, pady=5)
        self.txtDiagonal2 = Entry(mainFrame)
        self.txtDiagonal2.grid(row=1, column=1, padx=5, pady=5)
        self.txtSisi = Entry(mainFrame)
```

```
         self.txtSisi.grid(row=2, column=1, padx=5, pady=5)
        self.txtLuas = Entry(mainFrame)
        self.txtLuas.grid(row=4, column=1, padx=5, pady=5)
        self.txtKel = Entry(mainFrame)
        self.txtKel.grid(row=5, column=1, padx=5, pady=5)


        # Pasang Button
        self.btnHitung = Button(mainFrame, text='Hitung',
            command=self.onHitung)
        self.btnHitung.grid(row=3, column=1, padx=5, pady=5)


# fungsi untuk menghitung luas dan keliling lingkaran
    def onHitung(self, event=None):
        # perhitungan dengan metode Pemrograman Tidak Terstruktur

        d1= int(self.txtDiagonal1.get())
        d2= int(self.txtDiagonal2.get())
        sisi= int(self.txtSisi.get())
        komponenbelah= BelahK(d1,d2,sisi)
        luas = komponenbelah.luas()
        self.txtLuas.delete(0,END)
        self.txtLuas.insert(END,str(luas))

        kel = komponenbelah.keliling()
        self.txtKel.delete(0,END)
        self.txtKel.insert(END,str(kel))

    def onKeluar(self, event=None):
    # memberikan perintah menutup aplikasi
        self.parent.destroy()

if __name__ == '__main__':
    root = Tk()
    aplikasi = FrmBelahketupat(root, "By. Alfa Nashiha")
    root.mainloop()
```

Hasil Program Belah Ketupat ;