

# LAPORAN PRAKTIKUM

PEMROGRAMAN VISUAL

2023



Prepared By:

# Aplikasi Perhitungan Menggunakan Bahasa Pemrograman Python dan Konsep Object Oriented Programing (OOP)

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## Source Code

### 1. Persegi Panjang

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

class FrmPersegi:
    def __init__(self, parent, title):
        self.parent = parent
        self.parent.geometry("400x400")
        self.parent.title(title)
        self.parent.protocol("WM_DELETE_WINDOW", self.onKeluar)
        self.aturKomponen()

    def aturKomponen(self):
        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.txtKeliling = Entry(mainFrame)
        self.txtKeliling.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):

    panjang = int(self.txtPanjang.get())
    lebar = int(self.txtLebar.get())

    perspanj = persegipanjang(panjang, lebar)
    luas = perspanj.luas()
    kel = perspanj.keliling()
    self.txtLuas.delete(0, END)
    self.txtLuas.insert(END, str(luas))
    self.txtKeliling.delete(0, END)
    self.txtKeliling.insert(END, str(kel))

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

class persegipanjang():
    # perhitungan dengan metode Pemrograman OOP
    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) + (2 * self.lebar)

if __name__ == '__main__':
    root = Tk()
    aplikasi = FrmPersegi(root, "Program Luas dan Keliling Persegi Panjang")
    root.mainloop()

```

The image shows a Python IDE environment with a file explorer on the left, a code editor in the center, and a terminal at the bottom. The code in the editor is a Tkinter application for calculating the area and perimeter of a rectangle. A window titled "Program Luas dan Keliling Persegi Panjang" is running, displaying input fields for "Panjang" (12) and "Lebar" (10), a "Hitung" button, and output fields for "Luas" (120) and "Keliling" (44). The terminal shows the command to run the program.

```

1 from tkinter import Frame, Label, Entry, Button, YES, BOTH, END, Tk, W
2 class FrmPersegi:
3     def __init__(self, parent, title):
4         self.parent = parent
5         self.parent.geometry("400x200")
6
7
8
9
10
11
12
13
14
15
16
17
18
19 Label(mainFrame, text="Keliling:").grid(row=4, column=0,
20 sticky=W, padx=5, pady=5)
21 # pasang textbox
22 self.txtPanjang = Entry(mainFrame)
23 self.txtPanjang.grid(row=0, column=1, padx=5, pady=5)
24 self.txtLebar = Entry(mainFrame)

```

Terminal output:

```

PS C:\Users\Keke Crank\Documents\Semester 6\visual> & "C:\Users\Keke Crank\AppData\Local\Programs\Python\Python311\python.exe" "
c:\Users\Keke Crank\Documents\Semester 6\visual\tugas1\lingkaran.py"
PS C:\Users\Keke Crank\Documents\Semester 6\visual> & "C:\Users\Keke Crank\AppData\Local\Programs\Python\Python311\python.exe" "
c:\Users\Keke Crank\Documents\Semester 6\visual\tugas1\persegi.py"
PS C:\Users\Keke Crank\Documents\Semester 6\visual> & "C:\Users\Keke Crank\AppData\Local\Programs\Python\Python311\python.exe" "
c:\Users\Keke Crank\Documents\Semester 6\visual\tugas1\persegiipanjang.py"

```

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

[illegible]

```

Label(mainFrame, text="Sisi c:").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.txtAlas = Entry(mainFrame)
self.txtAlas.grid(row=0, column=1, padx=5, pady=5)
self.txtTinggi = Entry(mainFrame)
self.txtTinggi.grid(row=1, column=1, padx=5, pady=5)
self.txtSisia = Entry(mainFrame)
self.txtSisia.grid(row=2, column=1, padx=5, pady=5)
self.txtSisib = Entry(mainFrame)
self.txtSisib.grid(row=3, column=1, padx=5, pady=5)
self.txtSisic = Entry(mainFrame)
self.txtSisic.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.txtKeliling = Entry(mainFrame)
self.txtKeliling.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 persegi panjang

def onHitung(self, event=None):
    # perhitungan dengan metode Pemrograman Terstruktur
    alas = int(self.txtAlas.get())
    tinggi = int(self.txtTinggi.get())
    sisia = int(self.txtSisia.get())
    sisib = int(self.txtSisib.get())
    sisic = int(self.txtSisic.get())

    segi3 = segitiga(alas, tinggi, sisia, sisib, sisic)
    luas = segi3.luas()
    kel = segi3.keliling()

    self.txtLuas.delete(0, END)
    self.txtLuas.insert(END, str(luas))
    self.txtKeliling.delete(0, END)
    self.txtKeliling.insert(END, str(kel))

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

```

```

class segitiga():
    # perhitungan dengan metode Pemrograman OOP
    def __init__(self, alas, tinggi, sisia, sisib, sisic):
        self.alas = alas
        self.tinggi = tinggi
        self.sisia = sisia
        self.sisib = sisib
        self.sisic = sisic

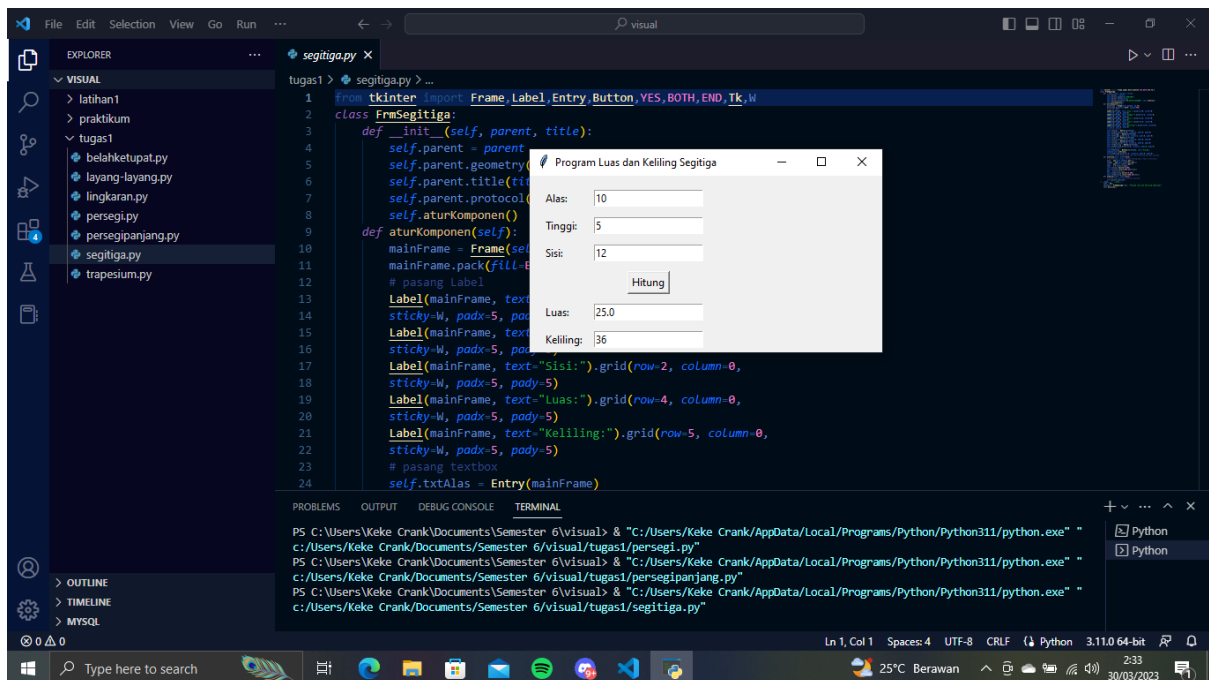
    def luas(self):
        return 0.5 * self.alas * self.tinggi

    def keliling(self):
        return self.sisia + self.sisib + self.sisic

if __name__ == '__main__':
    root = Tk()
    aplikasi = FrmSegitiga(root, "Program Luas dan Keliling Segitiga")
    root.mainloop()

```

## Hasil Program Perhitungan Segitiga



## 3. Persegi / Bujur Sangkar

```

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

```

```

class FrmPersegi:

```

```

def __init__(self, parent, title):
    self.parent = parent
    self.parent.geometry("400x400")
    self.parent.title(title)
    self.parent.protocol("WM_DELETE_WINDOW", self.onKeluar)
    self.aturKomponen()

def aturKomponen(self):
    mainFrame = Frame(self.parent, bd=10)
    mainFrame.pack(fill=BOTH, expand=YES)
    # pasang Label
    Label(mainFrame, text='Sisi :').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.txtSisi = Entry(mainFrame)
    self.txtSisi.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.txtKeliling = Entry(mainFrame)
    self.txtKeliling.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 persegi panjang

def onHitung(self, event=None):
    # perhitungan dengan metode Pemrograman Terstruktur
    sisi = int(self.txtSisi.get())

    perseg = persegi(sisi)
    luas = perseg.luas()
    kel = perseg.keliling()

    self.txtLuas.delete(0, END)
    self.txtLuas.insert(END, str(luas))
    self.txtKeliling.delete(0, END)
    self.txtKeliling.insert(END, str(kel))

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

class persegi():

```

```

def __init__(self, sisi):
    self.sisi = sisi

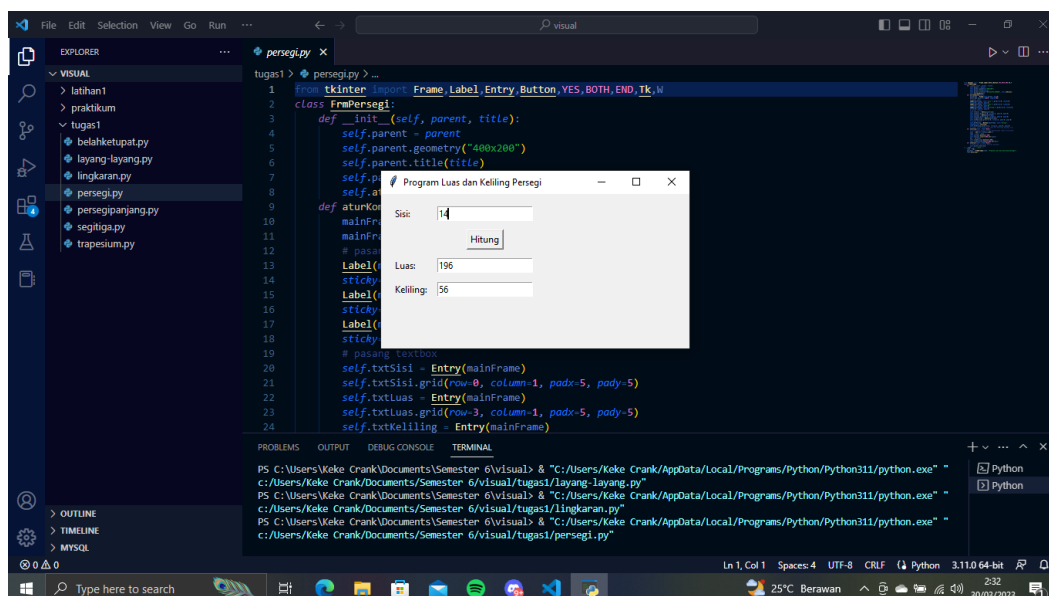
def luas(self):
    return self.sisi * self.sisi

def keliling(self):
    return (4 * self.sisi)

if __name__ == '__main__':
    root = Tk()
    aplikasi = FrmPersegi(root, "Program Luas dan Keliling Persegi")
    root.mainloop()

```

## Hasil Program Perhitungan Persegi / Bujur Sangkar



## 4. Lingkaran

```

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

```

```

class FrmLingkaran:
    def __init__(self, parent, title):
        self.parent = parent
        self.parent.geometry("400x400")
        self.parent.title(title)
        self.parent.protocol("WM_DELETE_WINDOW", self.onKeluar)
        self.aturKomponen()

    def aturKomponen(self):

```



```

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.txtjari = Entry(mainFrame)
self.txtjari.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.txtKeliling = Entry(mainFrame)
self.txtKeliling.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 persegi panjang

def onHitung(self, event=None):
    # perhitungan dengan metode Pemrograman Terstruktur
    jari = float(self.txtjari.get())

    bunder = lingkaran(jari)
    luas = bunder.luas()
    kel = bunder.keliling()

    self.txtLuas.delete(0, END)
    self.txtLuas.insert(END, str(luas))
    self.txtKeliling.delete(0, END)
    self.txtKeliling.insert(END, str(kel))

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

class lingkaran():
    # perhitungan dengan metode Pemrograman OOP
    def __init__(self, jari):
        self.jari = jari

    def luas(self):
        return 3.14 * (self.jari * self.jari)

    def keliling(self):

```

```
return 2 * 3.14 * self.jari
```

```
if __name__ == '__main__':
    root = Tk()
    aplikasi = FrmLingkaran(root, "Program Luas dan Keliling Lingkaran")
    root.mainloop()
```

```
class FrmTrapeسيوم:
    def __init__(self, parent, title):
        self.parent = parent
        self.parent.geometry("400x400")
        self.parent.title(title)
        self.parent.protocol("WM_DELETE_WINDOW", self.onKeluar)
```

```

self.aturKomponen()

def aturKomponen(self):
    mainFrame = Frame(self.parent, bd=10)
    mainFrame.pack(fill=BOTH, expand=YES)
    # pasang Label
    Label(mainFrame, text='Alas a :').grid(
        row=0, column=0, sticky=W, padx=5, pady=5)
    Label(mainFrame, text='Alas b :').grid(
        row=1, column=0, sticky=W, padx=5, pady=5)
    Label(mainFrame, text='Tinggi :').grid(
        row=2, column=0, sticky=W, padx=5, pady=5)
    Label(mainFrame, text='Sisi a:').grid(
        row=3, column=0, sticky=W, padx=5, pady=5)
    Label(mainFrame, text='Sisi b:').grid(
        row=4, column=0, sticky=W, padx=5, pady=5)
    Label(mainFrame, text='Sisi c:').grid(
        row=5, column=0, sticky=W, padx=5, pady=5)
    Label(mainFrame, text='Sisi d:').grid(
        row=6, column=0, sticky=W, padx=5, pady=5)
    Label(mainFrame, text="Luas :").grid(
        row=8, column=0, sticky=W, padx=5, pady=5)
    Label(mainFrame, text="Keliling :").grid(
        row=9, column=0, sticky=W, padx=5, pady=5)
    # pasang textbox
    self.txtalasa = Entry(mainFrame)
    self.txtalasa.grid(row=0, column=1, padx=5, pady=5)
    self.txtalasd = Entry(mainFrame)
    self.txtalasd.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.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.txtsisic = Entry(mainFrame)
    self.txtsisic.grid(row=5, column=1, padx=5, pady=5)
    self.txtsisid = Entry(mainFrame)
    self.txtsisid.grid(row=6, column=1, padx=5, pady=5)
    self.txtLuas = Entry(mainFrame)
    self.txtLuas.grid(row=8, column=1, padx=5, pady=5)
    self.txtKeliling = Entry(mainFrame)
    self.txtKeliling.grid(row=9, column=1, padx=5, pady=5)
    # Pasang Button
    self.btnHitung = Button(mainFrame, text='Hitung',
                            command=self.onHitung)
    self.btnHitung.grid(row=7, column=1, padx=5, pady=5)
    # fungsi untuk menghitung luas dan keliling persegi panjang

```

```

def onHitung(self, event=None):
    # perhitungan dengan metode Pemrograman Terstruktur
    alasa = int(self.txtalasa.get())
    alasb = int(self.txtalasd.get())
    tinggi = int(self.txttinggi.get())
    sisia = int(self.txtsisia.get())
    sisib = int(self.txtsisib.get())
    sisic = int(self.txtsisic.get())
    sisid = int(self.txtsisid.get())

    trapes = trapesium(alasa, alasb, tinggi, sisia, sisib, sisic, sisid)
    luas = trapes.luas()
    kel = trapes.keliling()

    self.txtLuas.delete(0, END)
    self.txtLuas.insert(END, str(luas))
    self.txtKeliling.delete(0, END)
    self.txtKeliling.insert(END, str(kel))

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

class trapesium():
    # perhitungan dengan metode Pemrograman OOP
    def __init__(self, alasa, alasb, tinggi, sisia, sisib, sisic, sisid):
        self.alasa = alasa
        self.alasb = alasb
        self.tinggi = tinggi
        self.sisia = sisia
        self.sisib = sisib
        self.sisic = sisic
        self.sisid = sisid

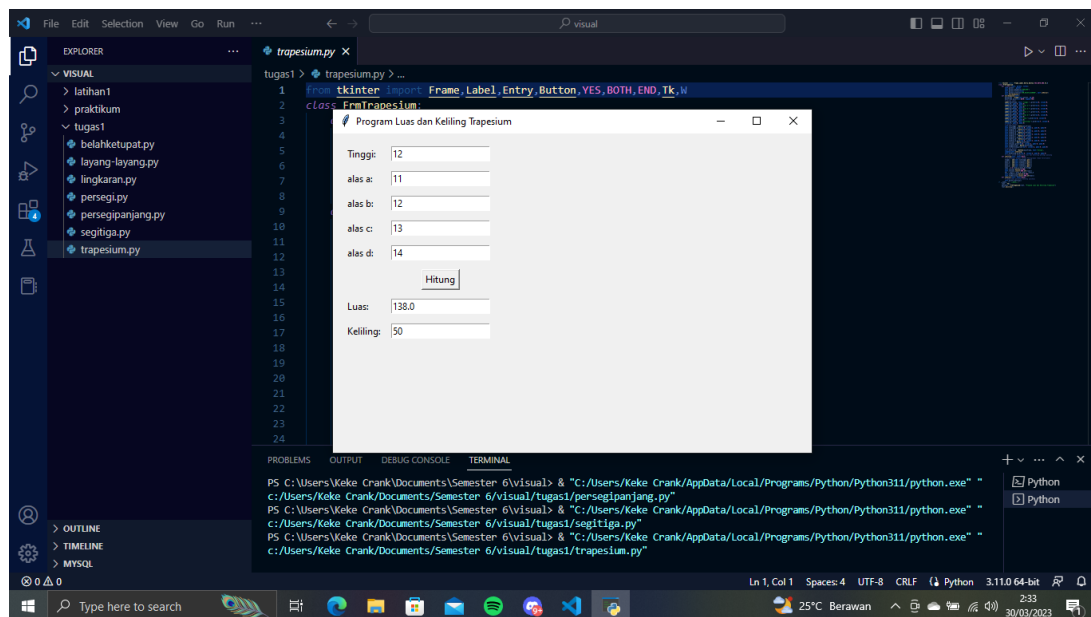
    def luas(self):
        return 1/2 * (self.alasa + self.alasb) * self.tinggi

    def keliling(self):
        return self.sisia + self.sisib + self.sisic + self.sisid

if __name__ == '__main__':
    root = Tk()
    aplikasi = FrmTrapesium(root, "Program Luas dan Keliling Trapesium")
    root.mainloop()

```

## Hasil Program Perhitungan Trapeisum



## 6. Layang – Layang

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

```
class FrmLayang:  
    def __init__(self, parent, title):  
        self.parent = parent  
        self.parent.geometry("400x400")  
        self.parent.title(title)  
        self.parent.protocol("WM_DELETE_WINDOW", self.onKeluar)  
        self.aturKomponen()  
  
    def aturKomponen(self):  
        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 Pendek Layang :').grid(row=2, column=0,
                                sticky=W, padx=5,
pady=5)
Label(mainFrame, text='Sisi Panjang Layang :').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.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.txtsisipen = Entry(mainFrame)
self.txtsisipen.grid(row=2, column=1, padx=5, pady=5)
self.txtsisipan = Entry(mainFrame)
self.txtsisipan.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.txtKeliling = Entry(mainFrame)
self.txtKeliling.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 persegi panjang

def onHitung(self, event=None):
    # perhitungan dengan metode Pemrograman Terstruktur
    d1 = int(self.txtdiagonal1.get())
    d2 = int(self.txtdiagonal2.get())
    sipen = int(self.txtsisipen.get())
    sipan = int(self.txtsisipan.get())

    lyg = layang(d1, d2, sipen, sipan)
    luas = lyg.luas()
    kel = lyg.keliling()

    self.txtLuas.delete(0, END)
    self.txtLuas.insert(END, str(luas))
    self.txtKeliling.delete(0, END)
    self.txtKeliling.insert(END, str(kel))

```

```

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

class layang():
    # perhitungan dengan metode Pemrograman OOP
    def __init__(self, d1, d2, sipen, sipan):
        self.d1 = d1
        self.d2 = d2
        self.sipen = sipen
        self.sipan = sipan

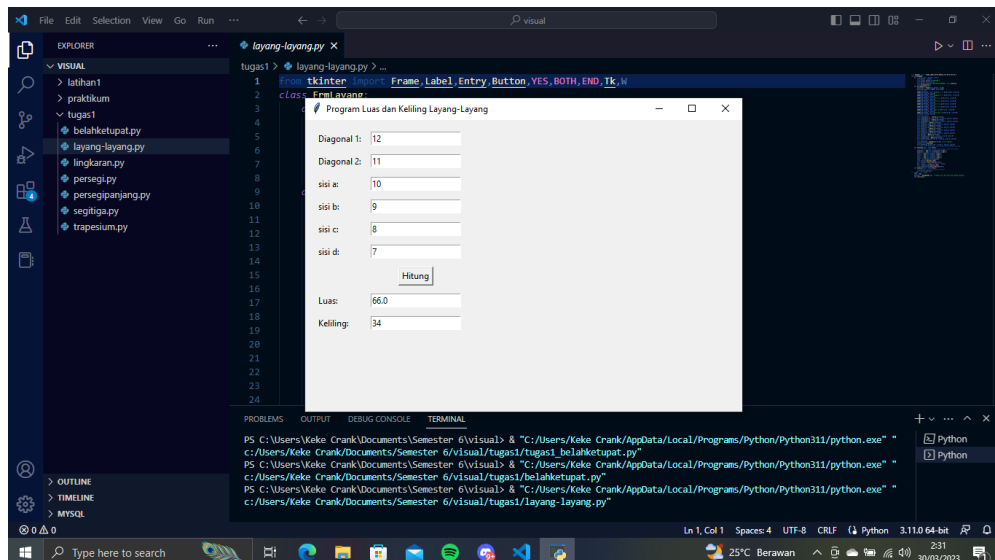
    def luas(self):
        return 1/2 * (self.d1 * self.d2)

    def keliling(self):
        return 2 * (self.sipen * self.sipan)

if __name__ == '__main__':
    root = Tk()
    aplikasi = FrmLayang(root, "Program Luas dan Keliling Layang Layang")
    root.mainloop()

```

## Hasil Program Perhitungan Layang - Layang



## 7. Belah Ketupat

```

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

```

```

class FrmBelahKetupat:
    def __init__(self, parent, title):
        self.parent = parent
        self.parent.geometry("400x400")
        self.parent.title(title)
        self.parent.protocol("WM_DELETE_WINDOW", self.onKeluar)
        self.aturKomponen()

    def aturKomponen(self):
        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.txtKeliling = Entry(mainFrame)
        self.txtKeliling.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 persegi panjang

    def onHitung(self, event=None):
        # perhitungan dengan metode Pemrograman Terstruktur
        d1 = int(self.txtdiagonal1.get())
        d2 = int(self.txtdiagonal2.get())
        sisi = int(self.txtsisi.get())

        belah = belahketupat(d1, d2, sisi)
        luas = belah.luas()

```



```

        kel = belah.keliling()

        self.txtLuas.delete(0, END)
        self.txtLuas.insert(END, str(luas))
        self.txtKeliling.delete(0, END)
        self.txtKeliling.insert(END, str(kel))

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

class belahketupat():
    # perhitungan dengan metode Pemrograman OOP
    def __init__(self, d1, d2, sisi):
        self.d1 = d1
        self.d2 = d2
        self.sisi = sisi

    def luas(self):
        return 1/2 * (self.d1 * self.d2)

    def keliling(self):
        return 4 * self.sisi

if __name__ == '__main__':
    root = Tk()
    aplikasi = FrmBelahKetupat(root, "Program Luas dan Keliling Belah
Ketupat")
    root.mainloop()

```

## Hasil Program Perhitungan Belah Ketupat

