Nama   : Dzaki Fadhlurrohman
NIM   : L200180064

Laporan Praktikum
Algoritma Struktur Data

1. Output file nomor1.py

2. Output file nomor2.py

3. Output file nomor3.py


```python
def jumlahHurufVokal(input):
    total = 0
    voc = ["a", "i", "u", "e", "o"]
    for A in input:
        if A in voc:
            total+=1
    return [len(input), total]

def jumlahHurufKonsonan(input):
    total = 0
    voc = ["a", "i", "u", "e", "o"]
    for A in input:
        if A in voc:
            total+=1
    return [len(input), len(input)-total]

v = jumlahHurufVokal("Surakarta")
k = jumlahHurufKonsonan("Surakarta")

print(v)
print(k)
```

```
[Done] exited with code=0 in 0.191 seconds

[Running] python -u "d:\Universitas Muhammadiyah Surakarta\Semester 4\prak algostruk\Modul1\nomor3.py"
[9, 4]
[9, 5]

[Done] exited with code=0 in 0.302 seconds
```
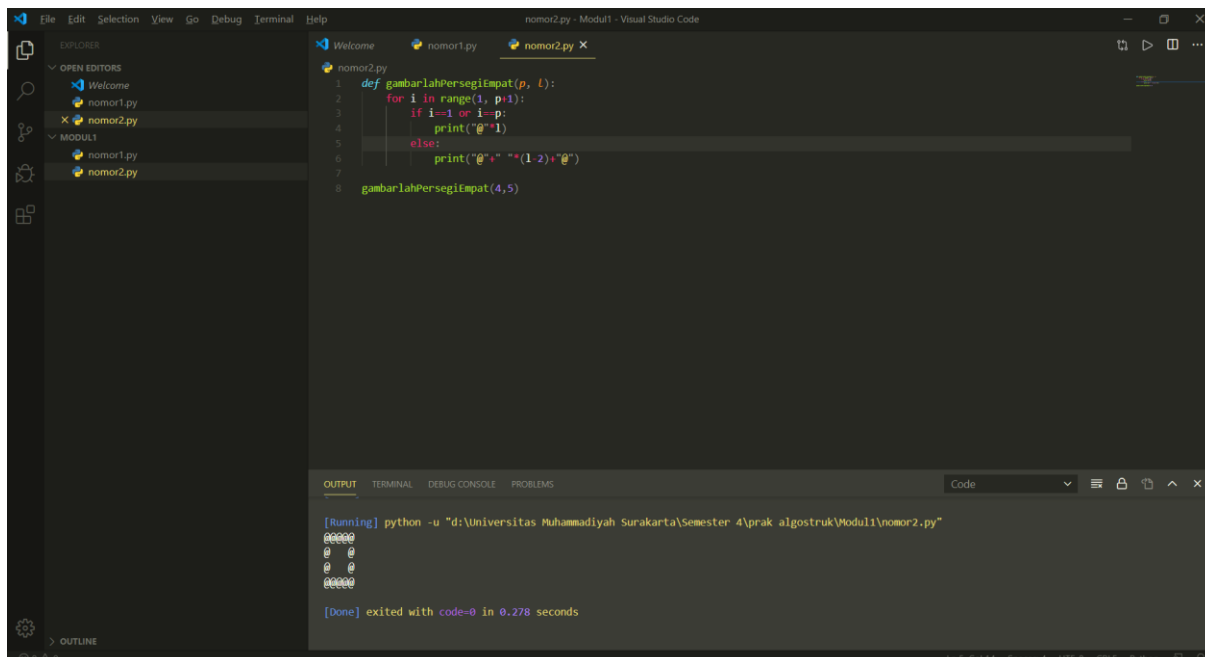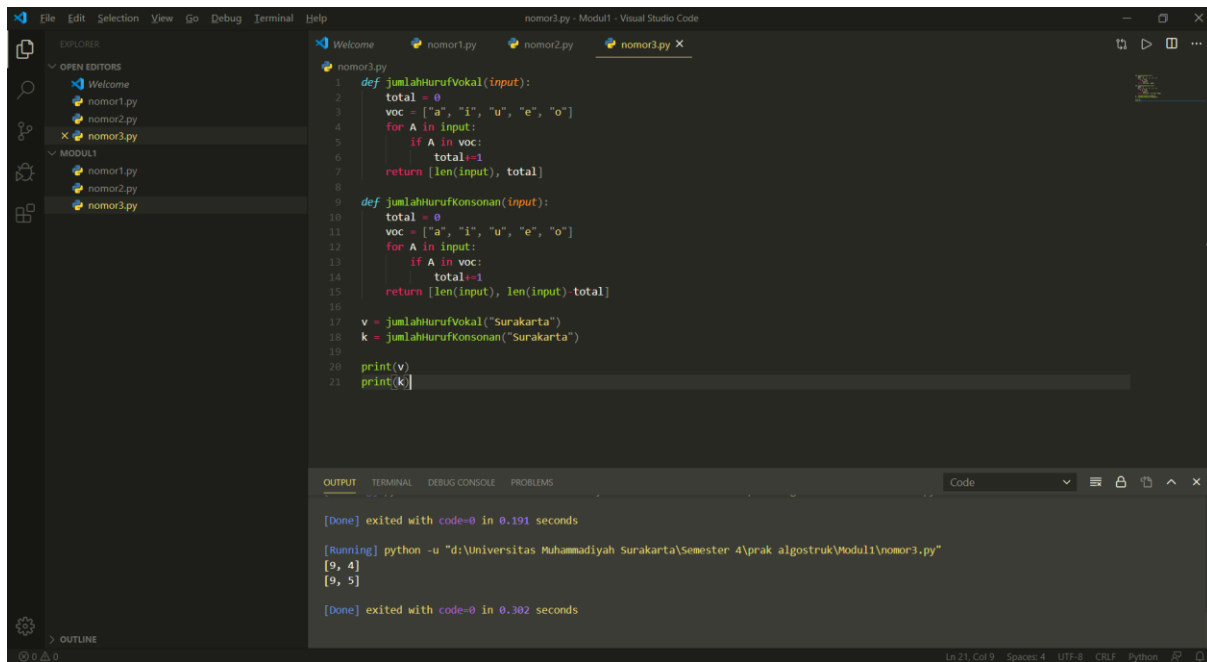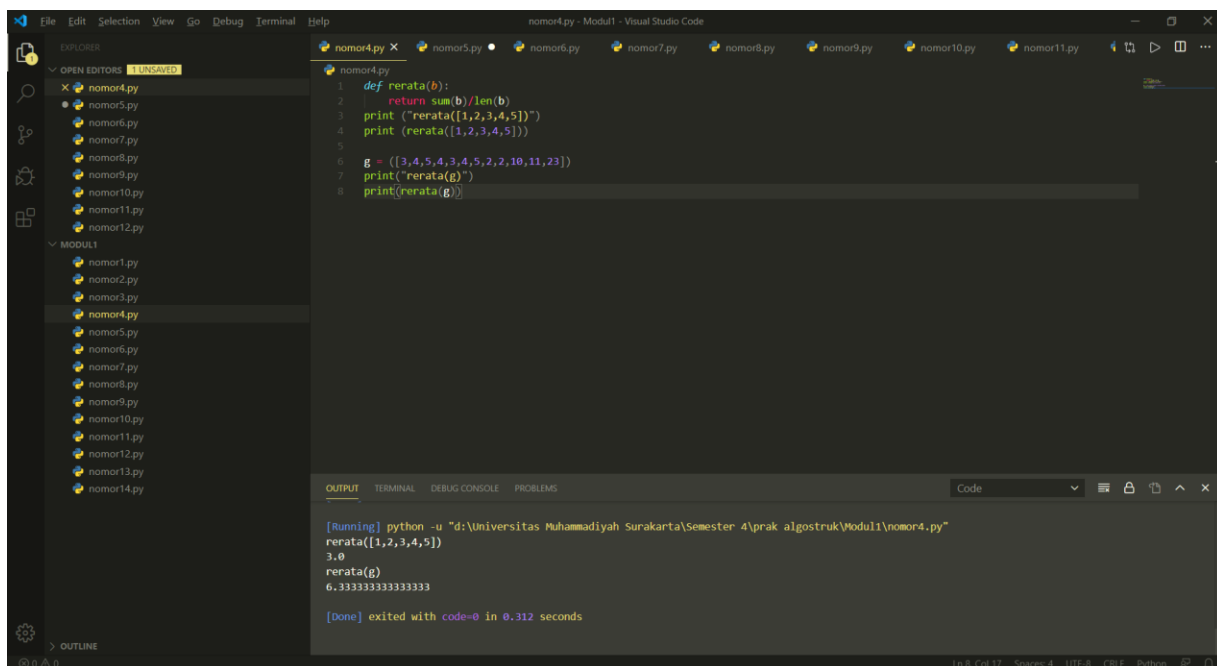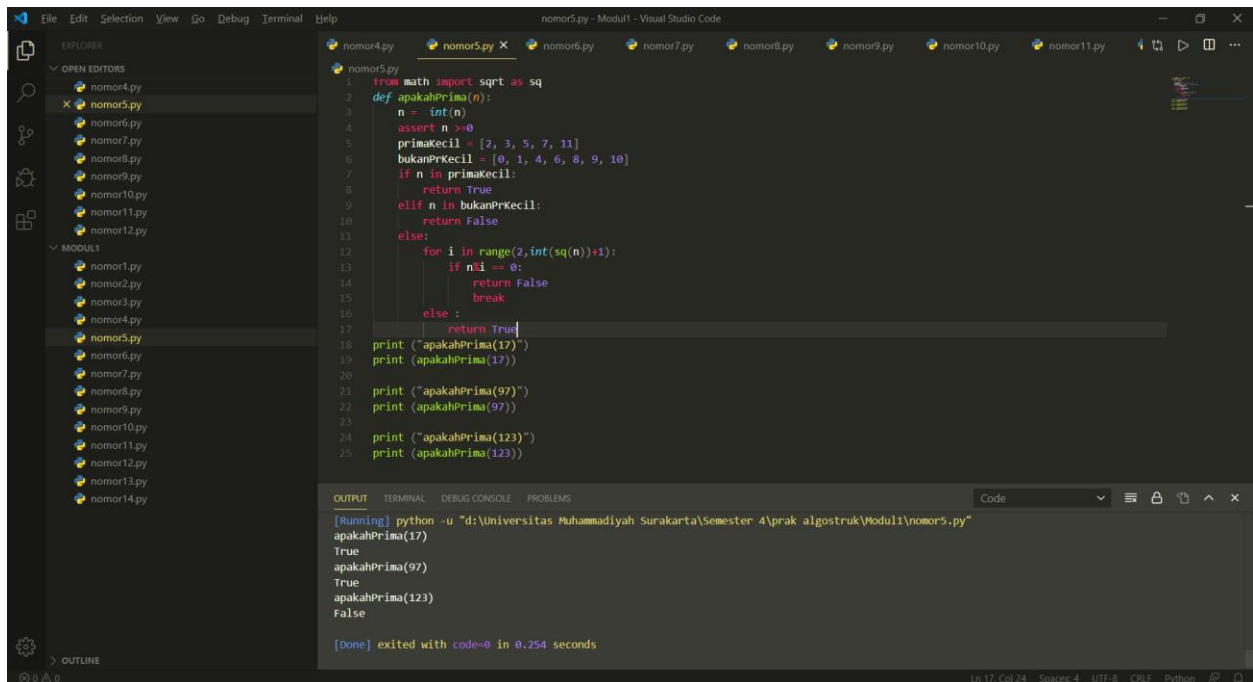
4. Output file nomor4.py


```python
def rerata(b):
    return sum(b)/len(b)
print ("rerata([1,2,3,4,5])")
print (rerata([1,2,3,4,5]))

g = ([3,4,5,4,3,4,5,2,2,10,11,23])
print("rerata(g)")
print(rerata(g))
```

```
[Running] python -u "d:\Universitas Muhammadiyah Surakarta\Semester 4\prak algostruk\Modul1\nomor4.py"
rerata([1,2,3,4,5])
3.0
rerata(g)
6.333333333333333

[Done] exited with code=0 in 0.312 seconds
```
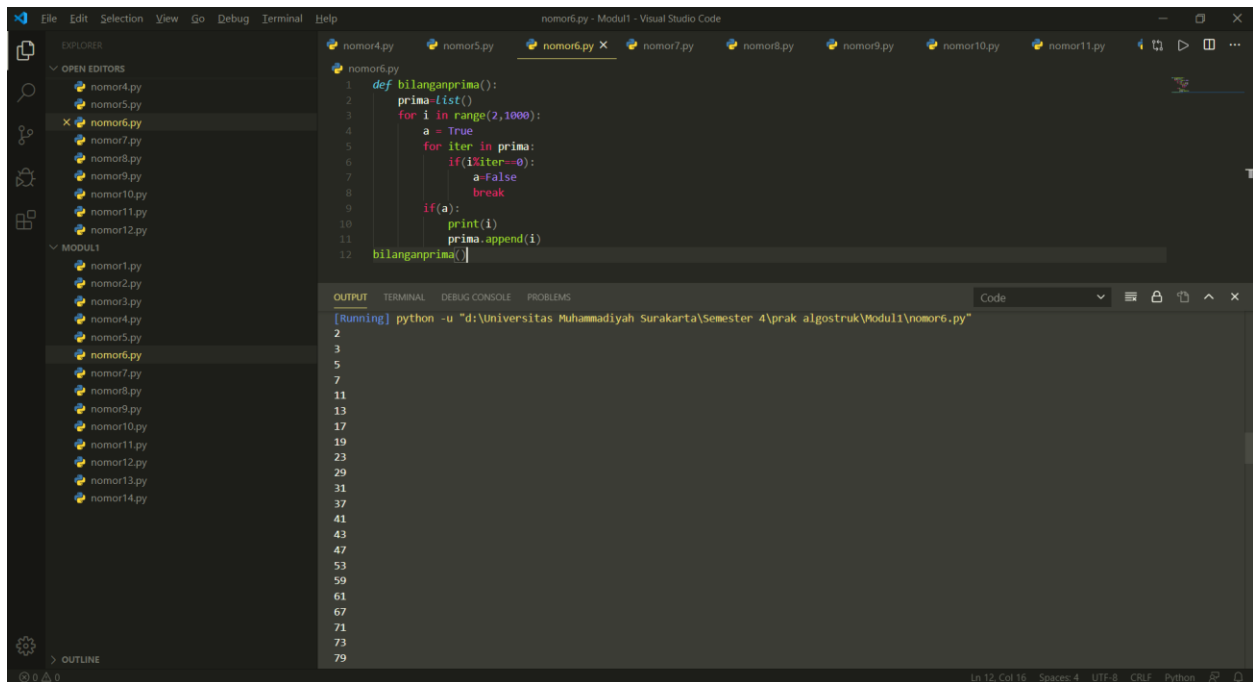
5. Output file nomor5.py


```python
from math import sqrt as sq
def apakahPrima(n):
    n =  int(n)
    assert n >=0
    primaKecil = [2, 3, 5, 7, 11]
    bukanPrKecil = [0, 1, 4, 6, 8, 9, 10]
    if n in primaKecil:
        return True
    elif n in bukanPrKecil:
        return False
    else:
        for i in range(2,int(sq(n))+1):
            if n%i == 0:
                return False
                break
            else :
                return True
print ("apakahPrima(17)")
print (apakahPrima(17))

print ("apakahPrima(97)")
print (apakahPrima(97))

print ("apakahPrima(123)")
print (apakahPrima(123))
```

```
[Running] python -u "d:\Universitas Muhammadiyah Surakarta\Semester 4\prak algostruk\Modul1\nomor5.py"
apakahPrima(17)
True
apakahPrima(97)
True
apakahPrima(123)
False

[Done] exited with code=0 in 0.254 seconds
```
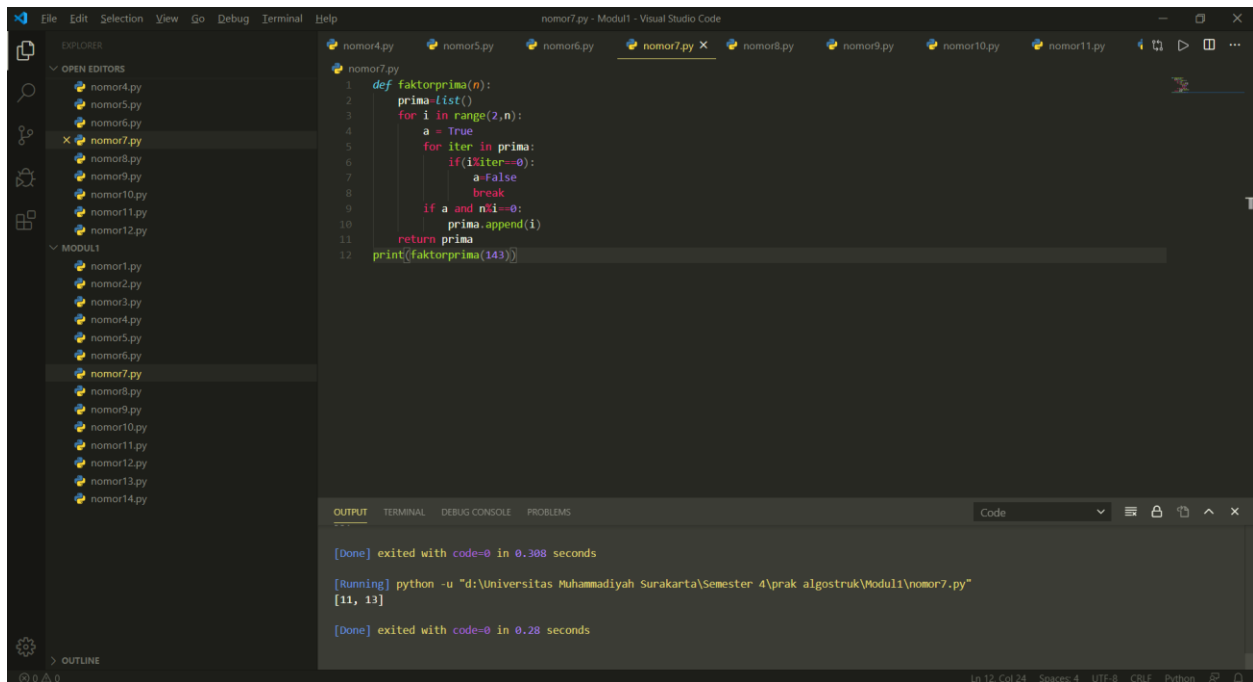
6. Output file nomor6.py


```python
def bilanganprima():
    prima=list()
    for i in range(2,1000):
        a = True
        for iter in prima:
            if(i%iter==0):
                a=False
                break
        if(a):
            print(i)
            prima.append(i)
bilanganprima()
```

```
[Running] python -u "d:\Universitas Muhammadiyah Surakarta\Semester 4\prak algostruk\Modul1\nomor6.py"
2
3
5
7
11
13
17
19
23
29
31
37
41
43
47
53
59
61
67
71
73
79
```

7. Output file nomor7.py

8. Output file nomor8.py

9. Output file nomor9.py


```python
def iterasi():
    for i in range(1,1000):
        if (i%3)!=0 and (i%5)!=0:
            print(i)
        else:
            if (i%15)==0:
                print("pyton UMS")
            elif (i%3)==0:
                print("python")
            elif (i%5)==0:
                print("UMS")
iterasi()
```

```
979
UMS
python
982
983
python
UMS
986
python
988
989
pyton UMS
991
992
python
994
UMS
python
997
998
python
PS D:\Universitas Muhammadiyah Surakarta\Semester 4\prak algostruk\Modul1>
```

10. Output file nomor10.py


```python
def selesaikanABC(a,b,c):
    a=float(a)
    b=float(b)
    c=float(c)
    D=(b**2)-(4*a*c)
    if D<0:
        return "determinan negatif"
    return "determinan positif"
print(selesaikanABC(1,1,2))
```
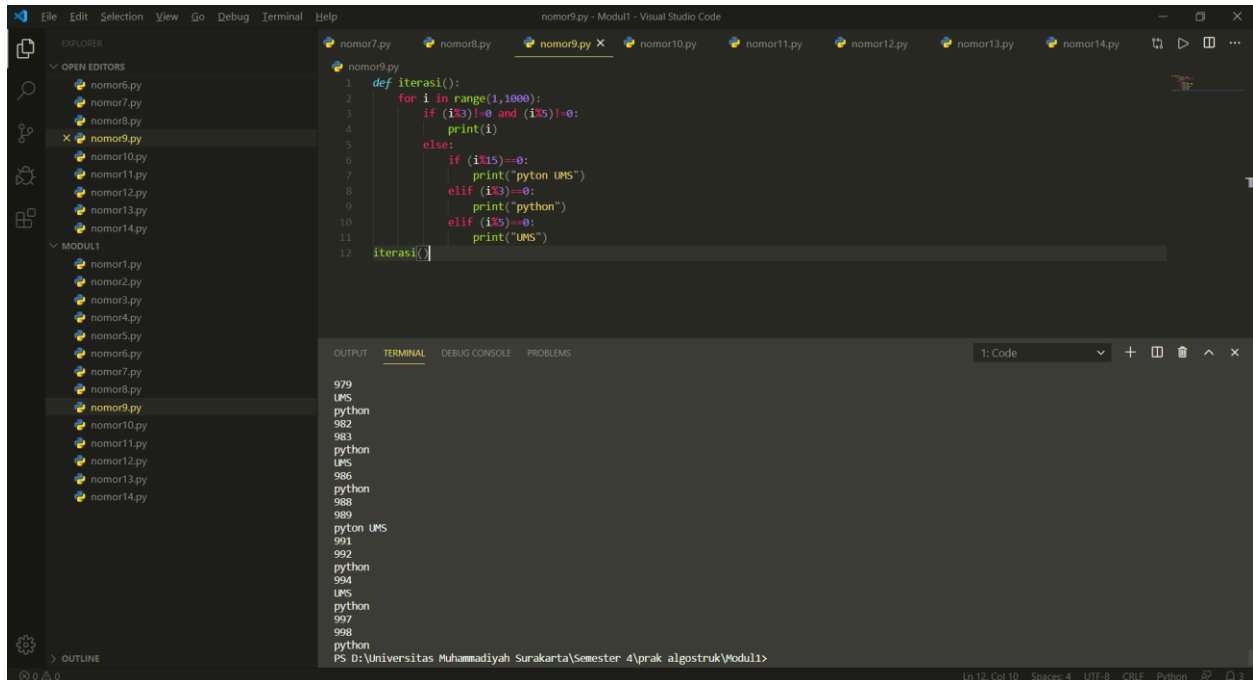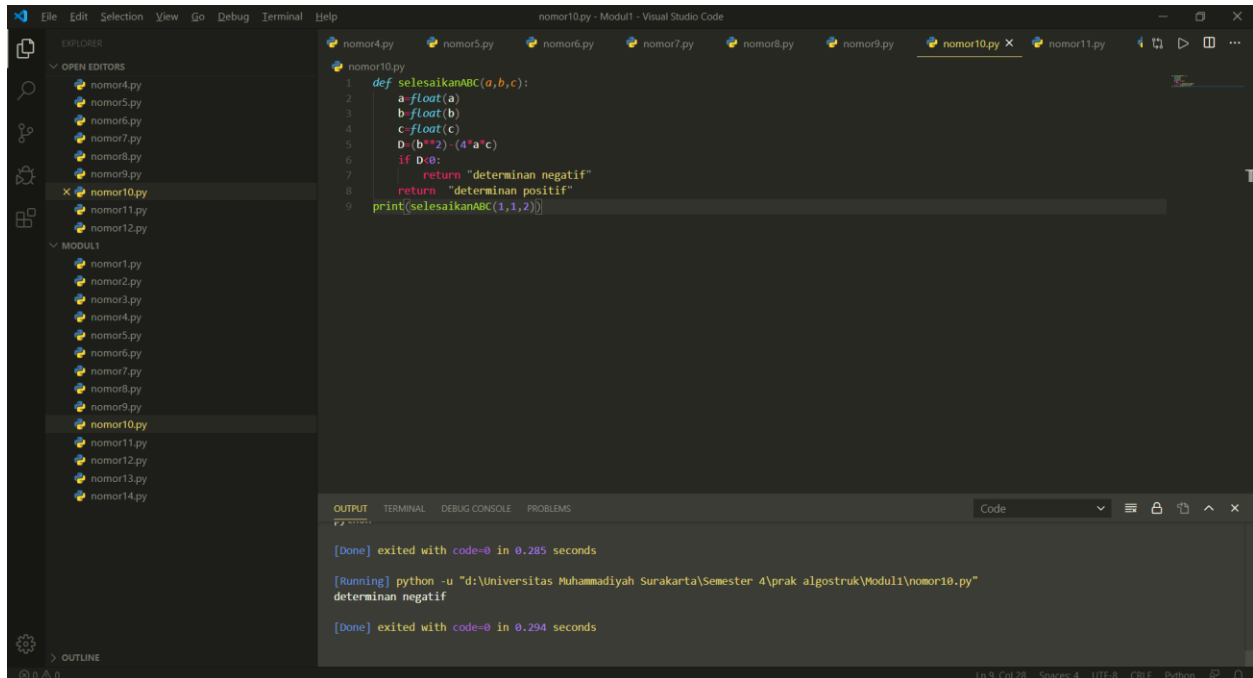
```
[Done] exited with code=0 in 0.285 seconds

[Running] python -u "d:\Universitas Muhammadiyah Surakarta\Semester 4\prak algostruk\Modul1\nomor10.py"
determinan negatif

[Done] exited with code=0 in 0.294 seconds
```

11. Output file nomor11.py


```python
def apakahKabisat(a):
    if(a%400==0):
        return True
    if(a%100==0):
        return False
    if(a%4==0):
        return True
    return False
print(apakahKabisat(1896))
```
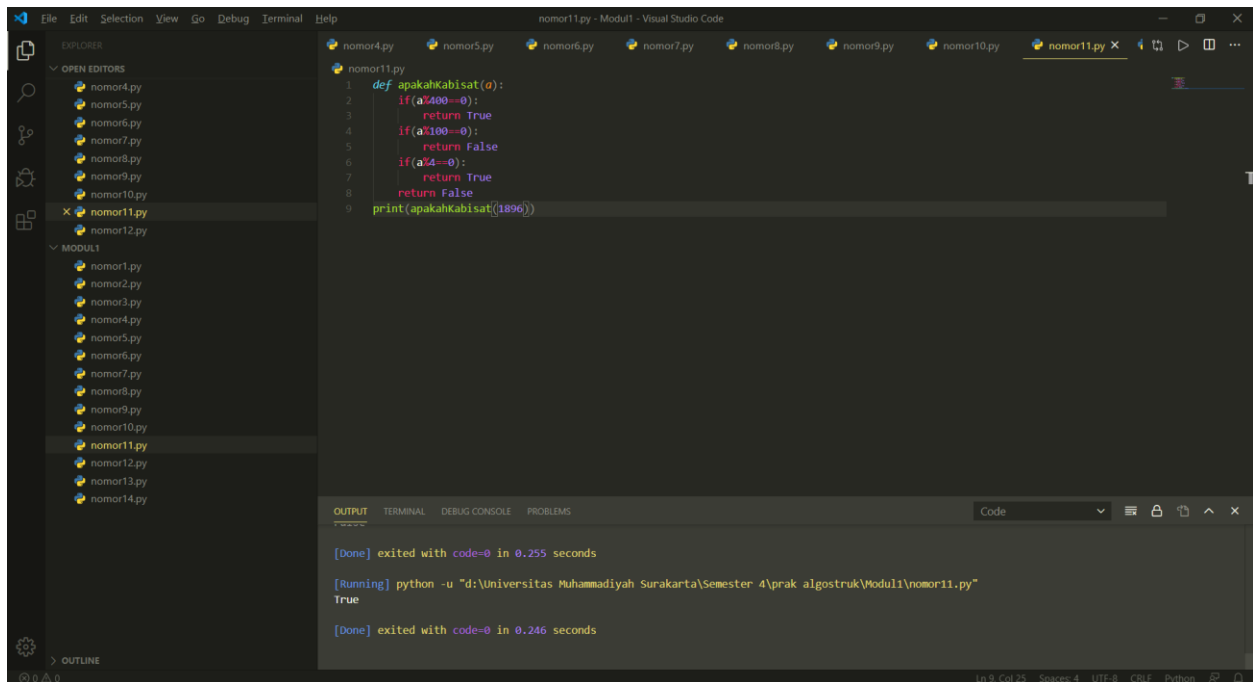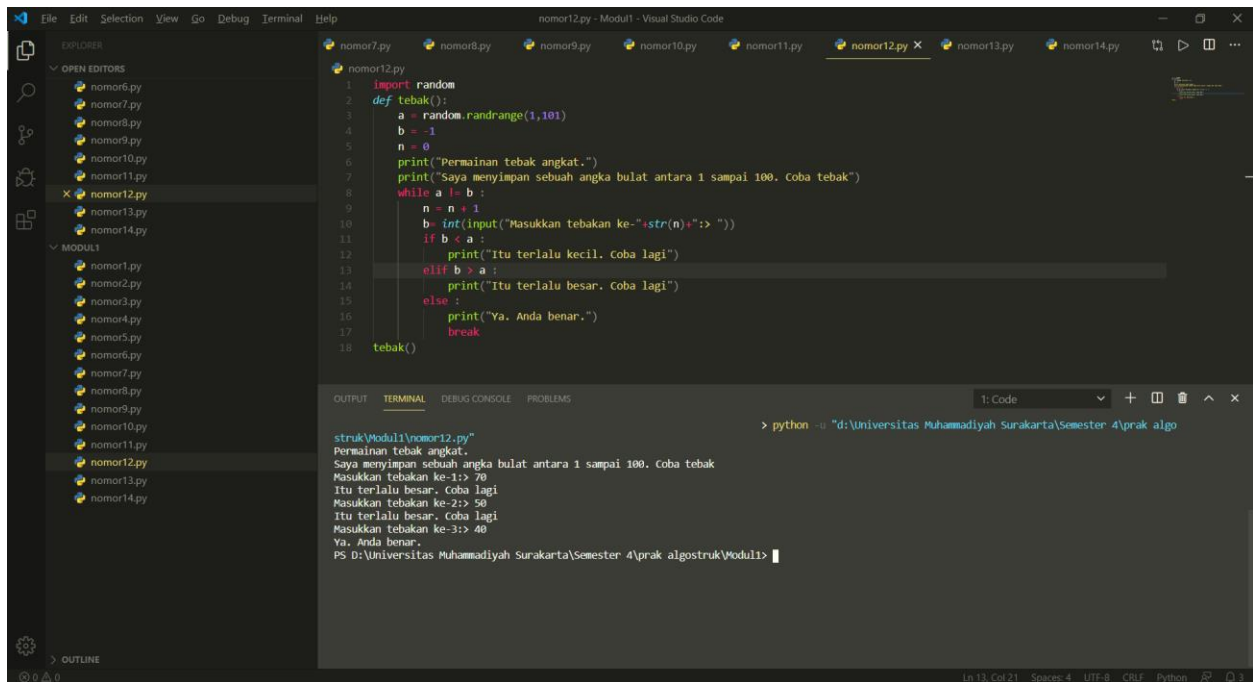
```
[Done] exited with code=0 in 0.255 seconds

[Running] python -u "d:\Universitas Muhammadiyah Surakarta\Semester 4\prak algostruk\Modul1\nomor11.py"
True

[Done] exited with code=0 in 0.246 seconds
```

12. Output file nomor12.py
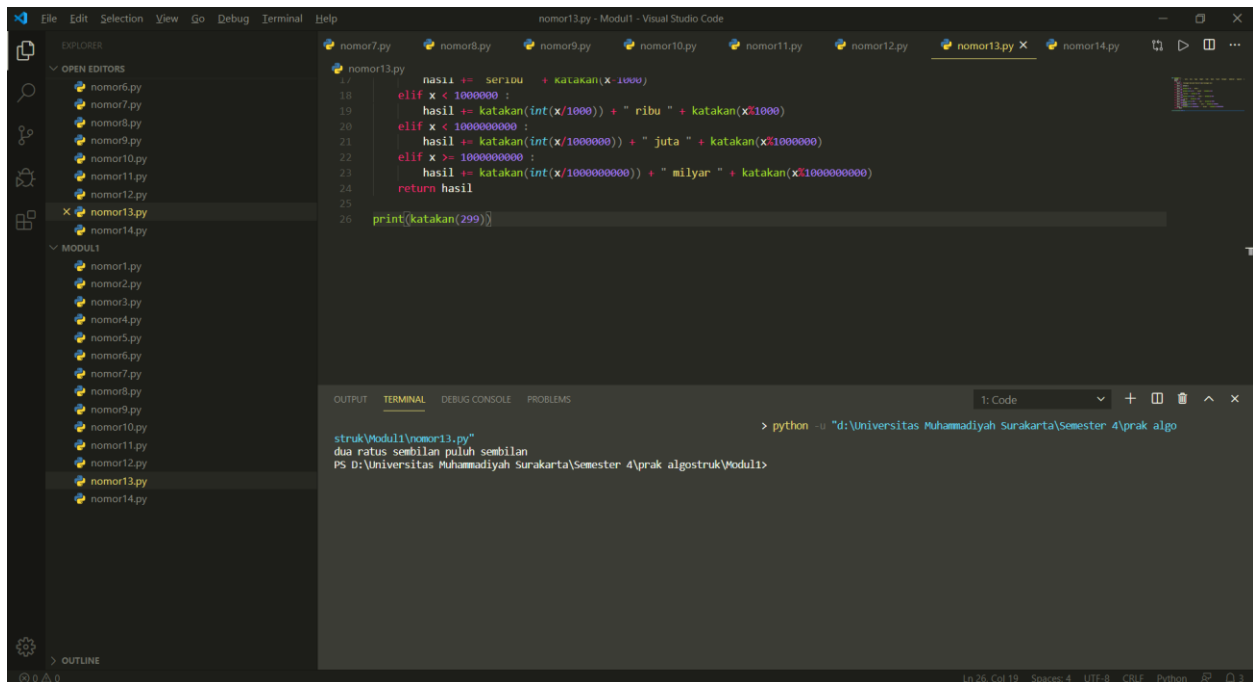

```python
import random
def tebak():
    a = random.randrange(1,101)
    b = -1
    n = 0
    print("Permainan tebak angkat.")
    print("Saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba tebak")
    while a != b :
        n = n + 1
        b= int(input("Masukkan tebakan ke-"+str(n)+":> "))
        if b < a :
            print("Itu terlalu kecil. Coba lagi")
        elif b > a :
            print("Itu terlalu besar. Coba lagi")
        else :
            print("Ya. Anda benar.")
            break
tebak()
```

```
struk\Modul1\nomor12.py"
Permainan tebak angkat.
Saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba tebak
Masukkan tebakan ke-1:> 70
Itu terlalu besar. Coba lagi
Masukkan tebakan ke-2:> 50
Itu terlalu besar. Coba lagi
Masukkan tebakan ke-3:> 40
Ya. Anda benar.
PS D:\Universitas Muhammadiyah Surakarta\Semester 4\prak algostruk\Modul1>
```

13. Output file nomor13.py


```python
        hasil +=  seribu   + katakan(x-1000)
    elif x < 1000000 :
        hasil += katakan(int(x/1000)) + " ribu " + katakan(x%1000)
    elif x < 1000000000 :
        hasil += katakan(int(x/1000000)) + " juta " + katakan(x%1000000)
    elif x >= 1000000000 :
        hasil += katakan(int(x/1000000000)) + " milyar " + katakan(x%1000000000)
    return hasil

print(katakan(299))
```

```
struk\Modul1\nomor13.py"
dua ratus sembilan puluh sembilan
PS D:\Universitas Muhammadiyah Surakarta\Semester 4\prak algostruk\Modul1>
```

14. Output file nomor14.py


```python
def formatRupiah(a) :
    a = list(str(a))
    b = len(a)
    if b % 3 == 0 :
        b = int(b/3) - 1
    else :
        b = int(b/3)
    n = 0
    for i in range(b) :
        x = -3*(i+1)
        a.insert(int(x)+n,".")
        n = n - 1
    a = "".join(a)
    print("Rp "+a)

print(formatRupiah(1500))
```

```
struk\Modul1\nomor14.py"
Rp 1.500
None
PS D:\Universitas Muhammadiyah Surakarta\Semester 4\prak algostruk\Modul1>
```