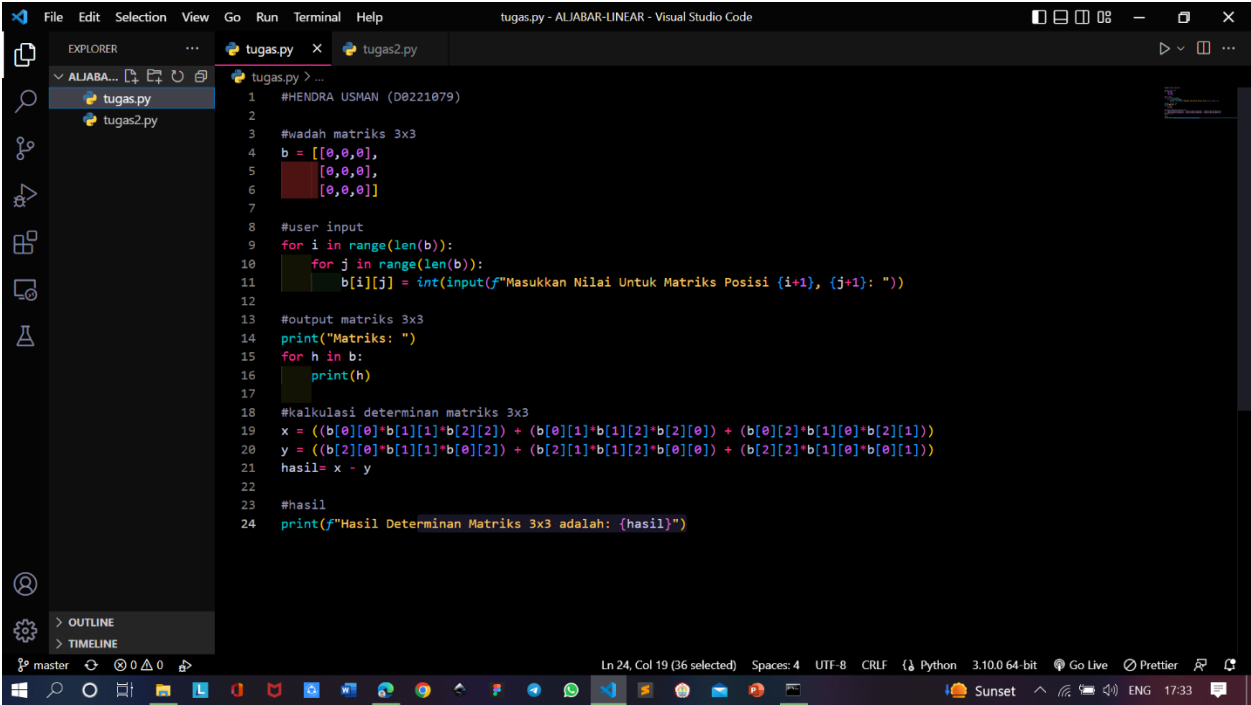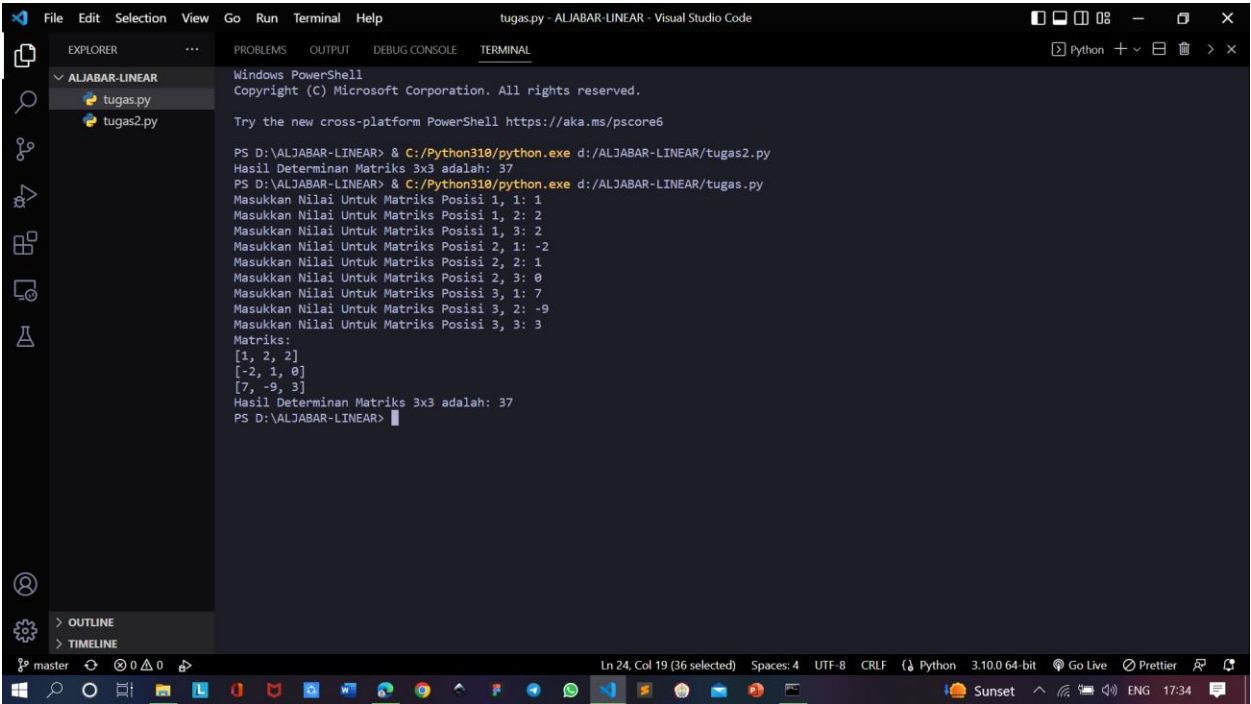**NAMA** : HENDRA USMAN
NIM : D0221079
KELAS : F
TUGAS : ALJABAR LINEAR (MENGHITUNG NILAI DETERMINAN MATRIKS)
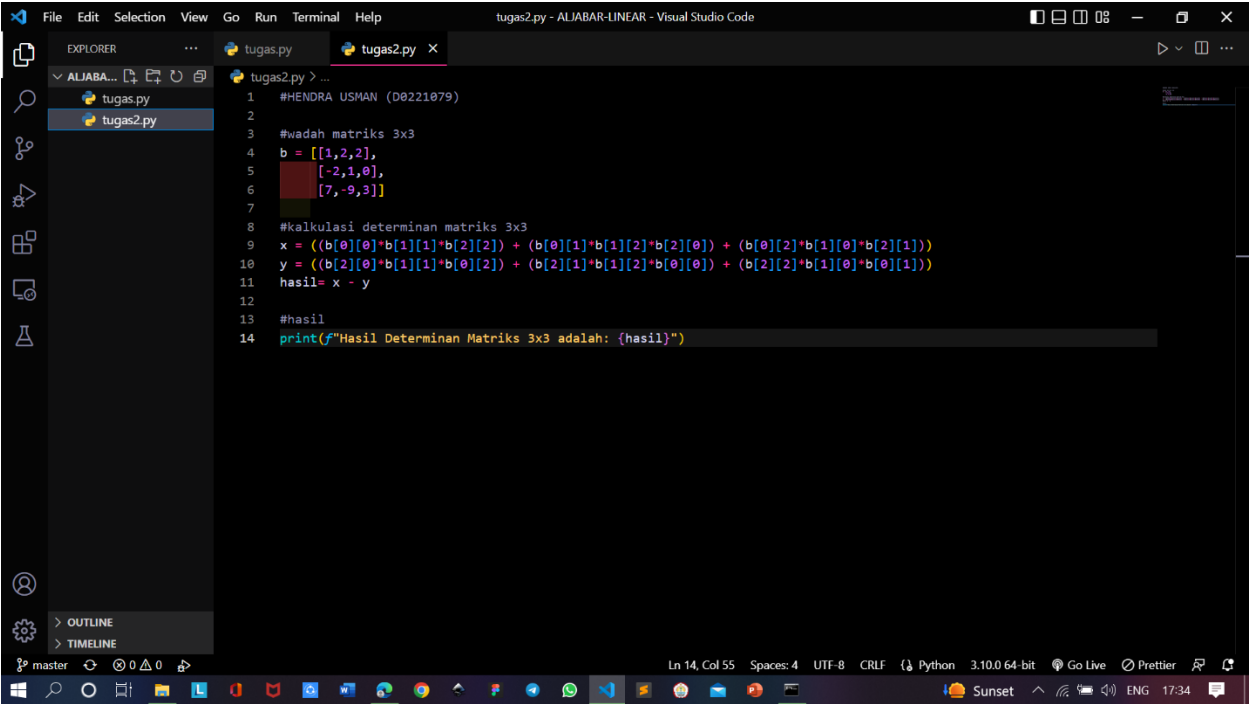
Progam 1: (Menggunakan User Input)
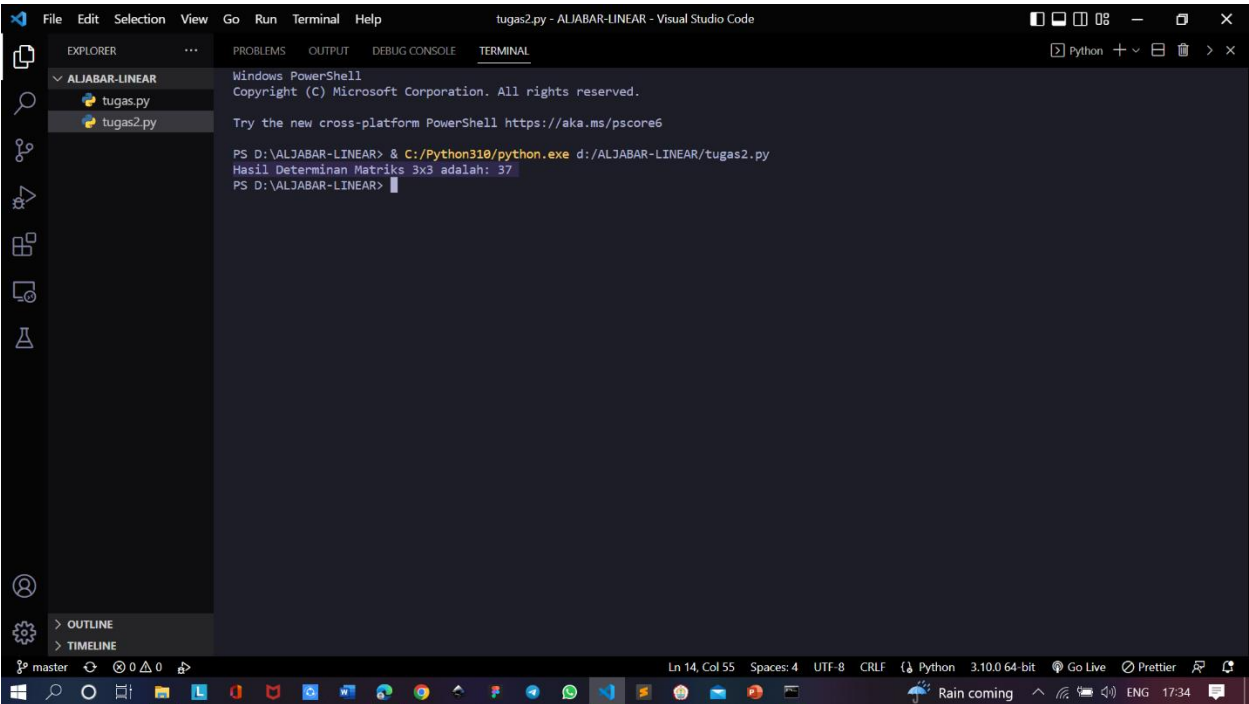

Output:

Progam 2: (Nilainya langsung dimasukkan)


```python
#HENDRA USMAN (D0221079)

#wadah matriks 3x3
b = [[1,2,2],
     [-2,1,0],
     [7,-9,3]]

#kalkulasi determinan matriks 3x3
x = ((b[0][0]*b[1][1]*b[2][2]) + (b[0][1]*b[1][2]*b[2][0]) + (b[0][2]*b[1][0]*b[2][1]))
y = ((b[2][0]*b[1][1]*b[0][2]) + (b[2][1]*b[1][2]*b[0][0]) + (b[2][2]*b[1][0]*b[0][1]))
hasil= x - y

#hasil
print(f"Hasil Determinan Matriks 3x3 adalah: {hasil}")
```

Output:


```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS D:\ALJABAR-LINEAR> & C:/Python310/python.exe d:/ALJABAR-LINEAR/tugas2.py
Hasil Determinan Matriks 3x3 adalah: 37
PS D:\ALJABAR-LINEAR>
```

Penghitungan Manual:

Nama : Hendra Usman
NIM : D0221079
Kelas : Informatika - F

Tugas :
Tentukan determinan dari matriks B berikut :
(Gunakan NIM masing-masing)

Jawab :

D	0	2	2	1	0	7	9
	A1	A2	A3	A4	A5	A6	A7

$$B = \begin{bmatrix} 1 & 2 & 2 \\ -2 & 1 & 0 \\ 7 & -9 & 3 \end{bmatrix} \Rightarrow |B| = \begin{matrix} 1 & 2 & 2 & 1 & 2 \\ -2 & 1 & 0 & -2 & 1 \\ 7 & -9 & 3 & 7 & -9 \end{matrix}$$

$$|B| = (1 \cdot 1 \cdot 3 + 2 \cdot 0 \cdot 7 + 2 \cdot (-2) \cdot (-9)) - (2 \cdot 1 \cdot 7$$
$$+ 1 \cdot 0 \cdot (-9) + 2 \cdot (-2) \cdot 3)$$
$$= (3 + 0 + 36) - (14 + 0 + (-12))$$
$$= 39 - 2$$
$$= 37$$

Jadi, diperoleh hasilnya yaitu 37.