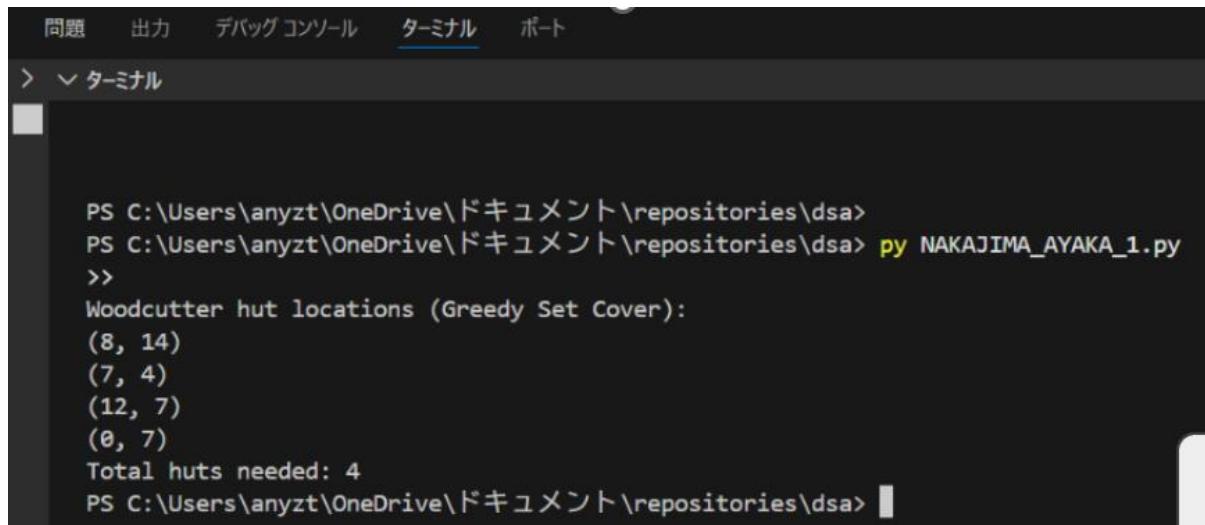


Assignment 8

Problem 1: run result



The screenshot shows a terminal window with the following text output:

```
PS C:\Users\anyzt\OneDrive\ドキュメント\repositories\dsa>
PS C:\Users\anyzt\OneDrive\ドキュメント\repositories\dsa> py NAKAJIMA_AYAKA_1.py
>>
Woodcutter hut locations (Greedy Set Cover):
(8, 14)
(7, 4)
(12, 7)
(0, 7)
Total huts needed: 4
PS C:\Users\anyzt\OneDrive\ドキュメント\repositories\dsa>
```

Problem 2: handwritten test cases

Sun → SNS		SNS → Sun	
'	S N S	'	S U N
S	0 1 2 3	S	0 1 2 3
U	1 0 1 2	U	1 0 1 2
N	2 1 1 2	N	2 1 1 1
	3 2 1 ②	S	3 2 2 ②
∅	→ abc	abcd	→ ∅
	a b c		∅
	0 1 2 ③	'	0
∅		a	1
		b	2
		c	3
		d	④
abc	→ adc	cat → cut	
	d	'	cut
	a b c	'	0 1 2 3
'	0 1 2 3	C	1 0 1 2
a	1 0 1 2	A	2 1 1 2
b	2 1 1 2	T	3 2 2 ①
c	3 2 2 ①		

Problem 3: run result

It may takes 2-3mins to accomplish.

I think it is due to having 3 loops, which causes the order $O(n^3)$.

And the terminal command view is a little bit weird, but that doesn't affect the result.

```
(18,3) - (11,17)                                     py .\NAKAJIMA_AYAKA_3.py
>> C:\Users\anyzt\OneDrive\ドキュメント\repositories\dsa>
Longest shortest-path distance: 469
Node pairs with this distance:
(11,17) - (18,3)
```