Software Engineering

Task 1

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Hard-Coding Variables

Input:

s1.py | s2.py | s3.py | s4.py

```
1  def temp(a,b,c,t):
2      return a*t**2+b*t+c
3  a=1.0
4  b = -3.0
5  c = 2.0
6  t = 5
7  print("At time ",t,",the temperature is : ",temp(a,b,c,t))
```

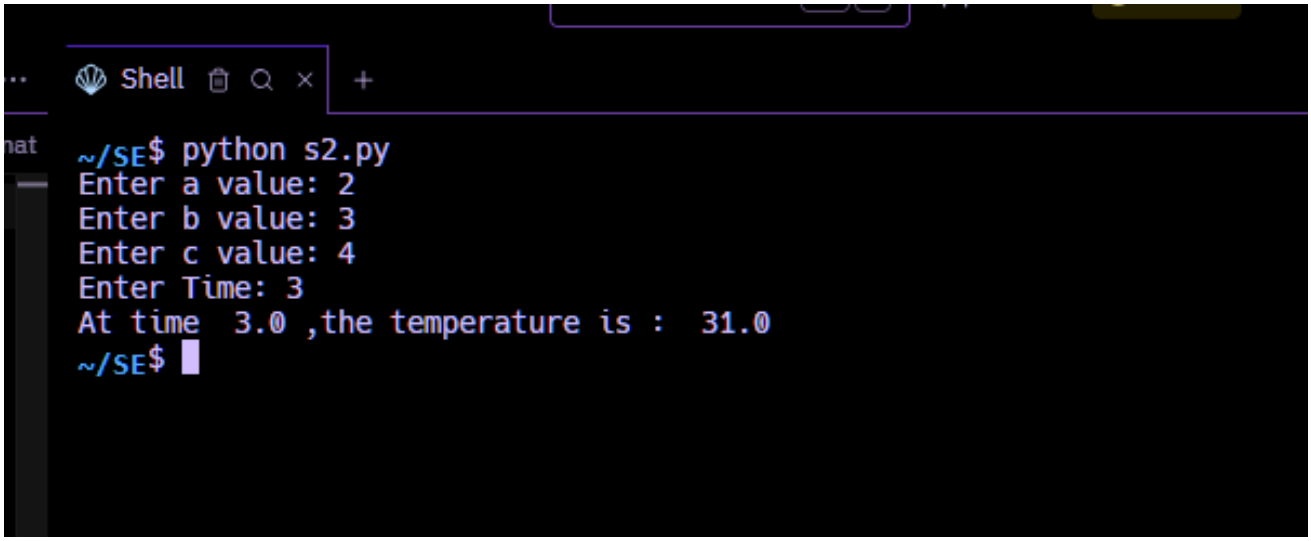
Output:

```
Shell
~/SE$ python s1.py
At time  5 ,the temperature is :  12.0
~/SE$
```

Keyboard-Input

Input:

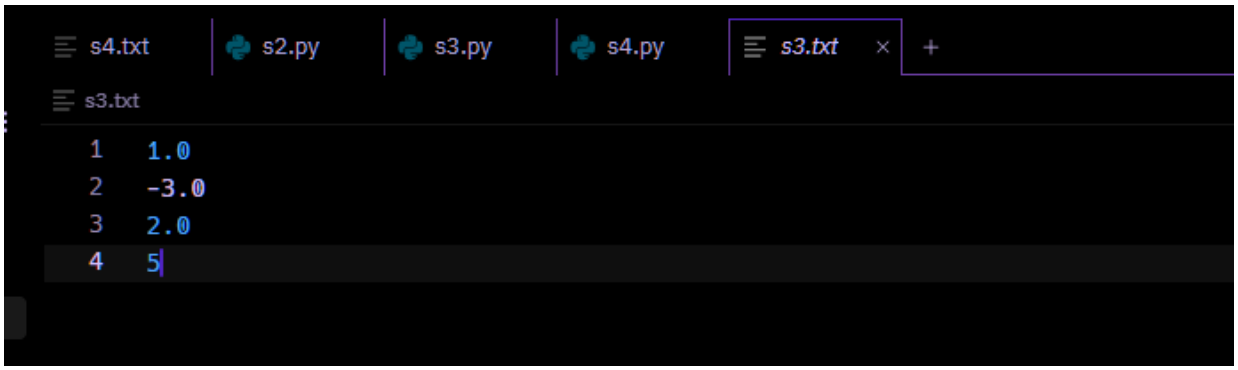
Output:



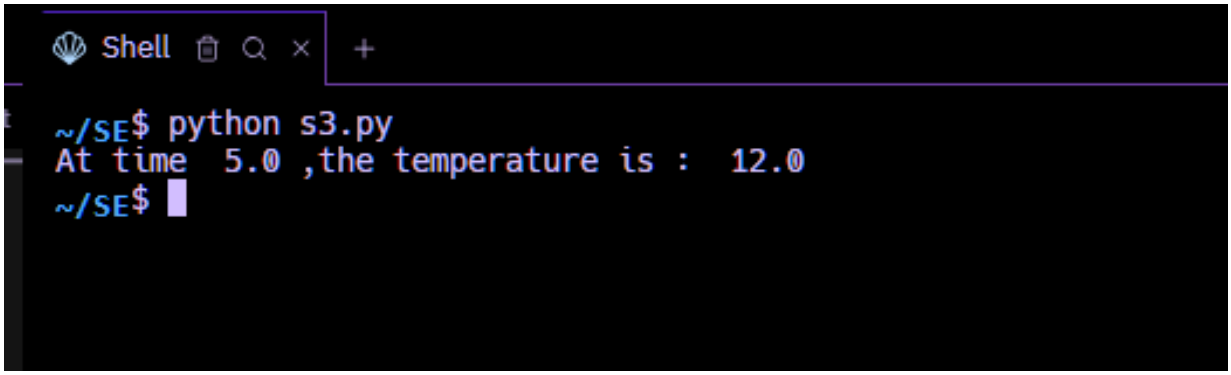
Reading from a file (single input):

Input:

Text input:



Output:



Reading from a file(multiple file):

Input:

s4.txt | s2.py | s3.py | s4.py

s4.py > ...

```python
def calculate_temperature(a, b, c, time):
    return a * time**2 + b * time + c

with open('s4.txt', 'r') as file:
    lines = file.readlines()

for line in lines:
    parts = line.strip().split()
    a = float(parts[0])
    b = float(parts[1])
    c = float(parts[2])
    time = float(parts[3])
    temperature = calculate_temperature(a, b, c, time)
    print(f"At time {time}, the temperature is {temperature}")
```

Text input:

s4.txt | s2.py | s3.py | s4.py | s3.txt

s4.txt

```
1.0 -4.0 3.0 5
2.0 -4.0 3.0 6
```

Output:

Shell

```
~/SE$ python s4.py
At time 5.0, the temperature is 8.0
At time 6.0, the temperature is 51.0
~/SE$
```