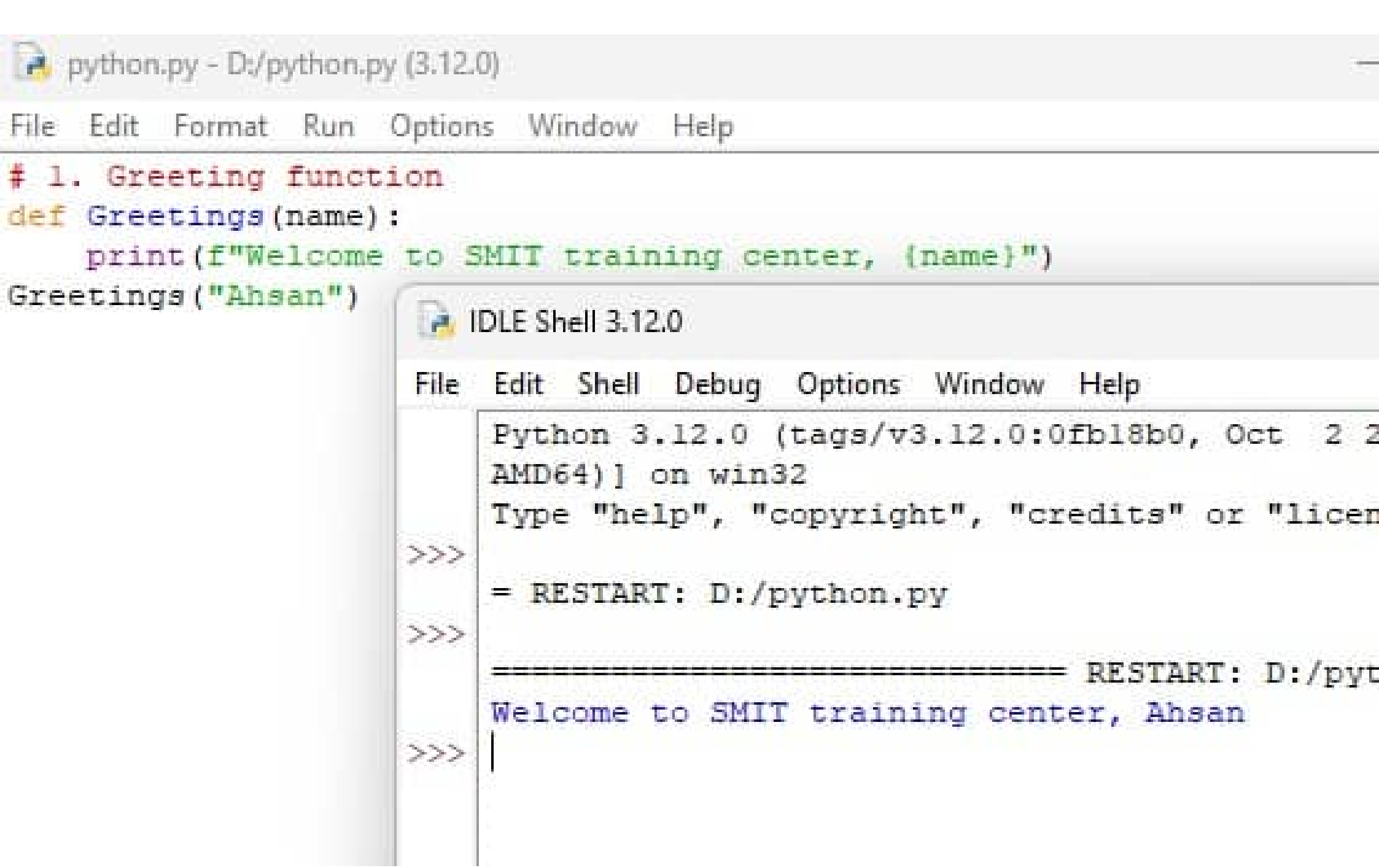
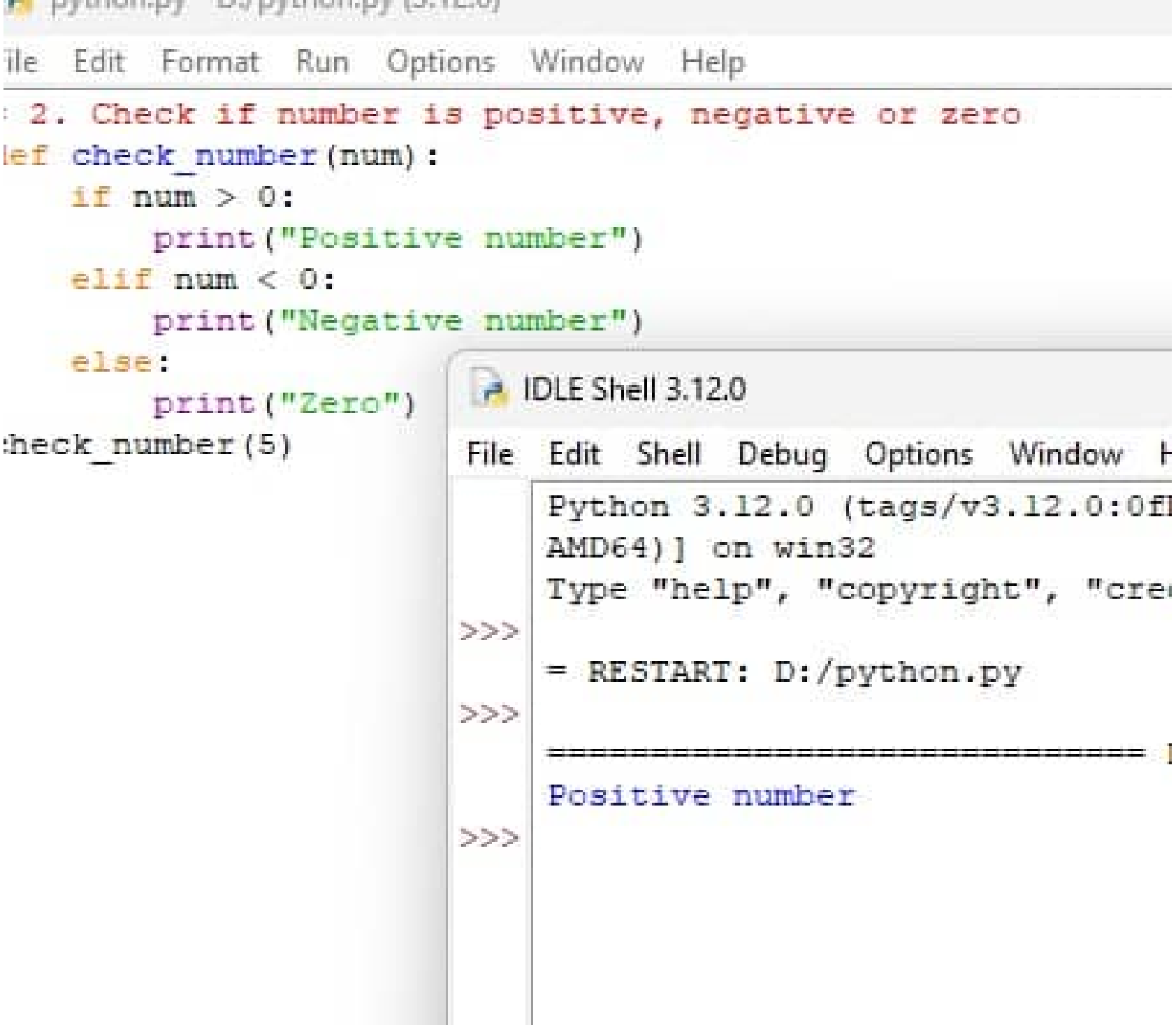
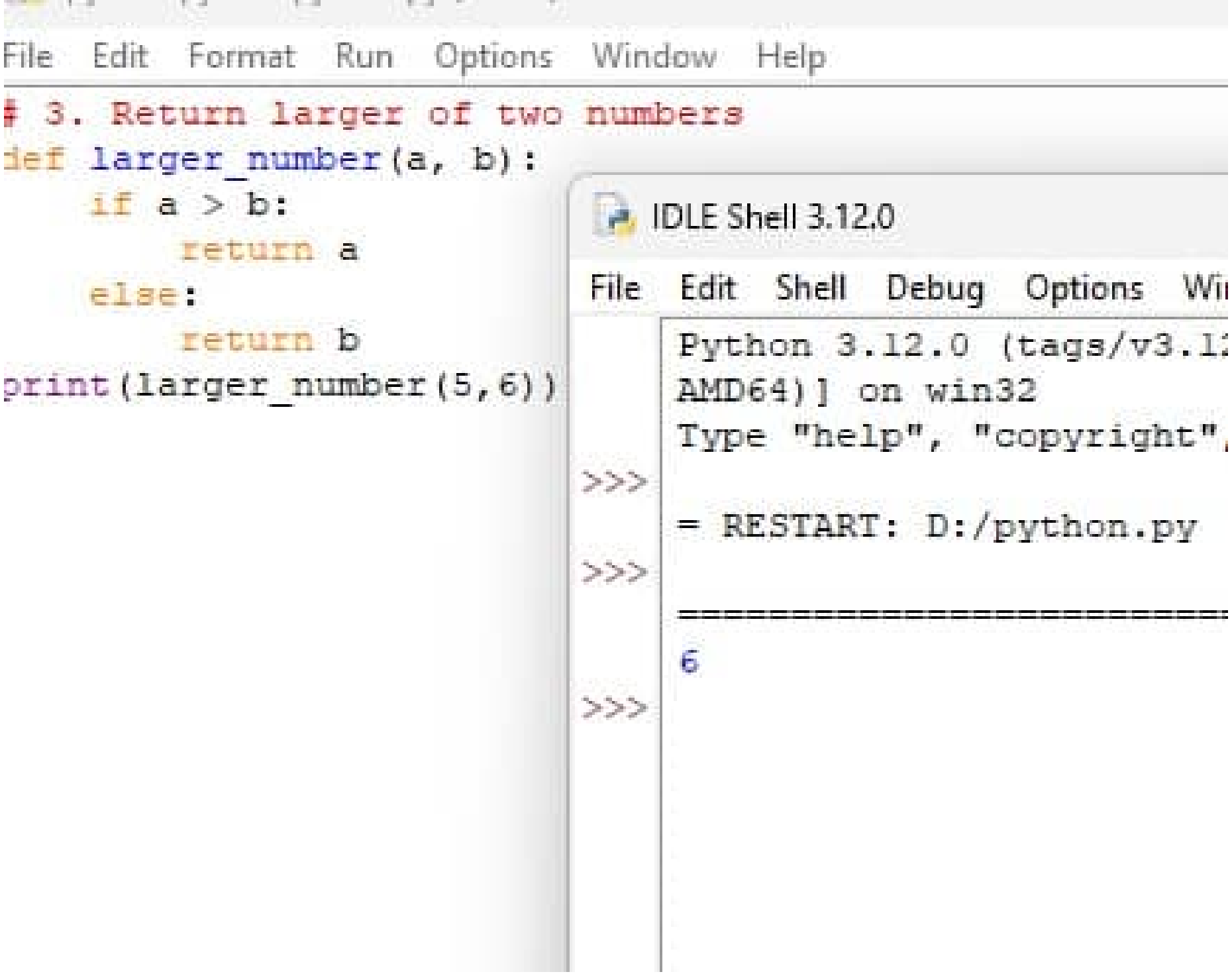






python.py - D:/python.py (3.12.0)

File Edit Format Run Options Window Help

```
# 4. Return largest of three numbers using if-else
def largest_number(a, b, c):
    if a >= b and a >= c:
        return a
    elif b >= a and b >= c:
        return b
    else:
        return c
print(largest_number(4,5,6))
```

IDLE Shell 3.12.0

File Edit Shell Debug Options

```
Python 3.12.0 (tags/v3
AMD64)] on win32
Type "help", "copyrigh
>>>
= RESTART: D:/python.p
6
>>>
```

python.py - D:/python.py (3.12.0)

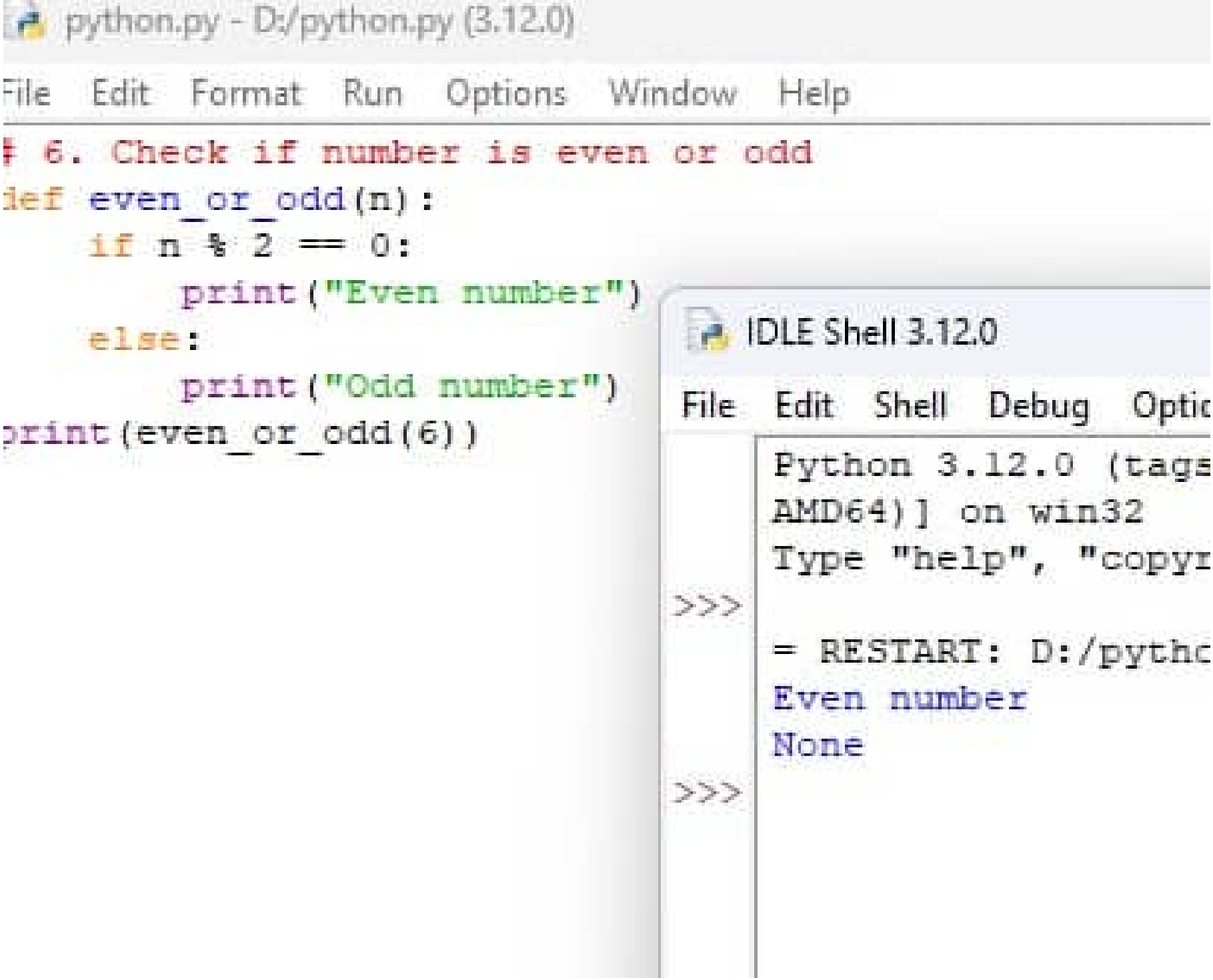
File Edit Format Run Options Window Help

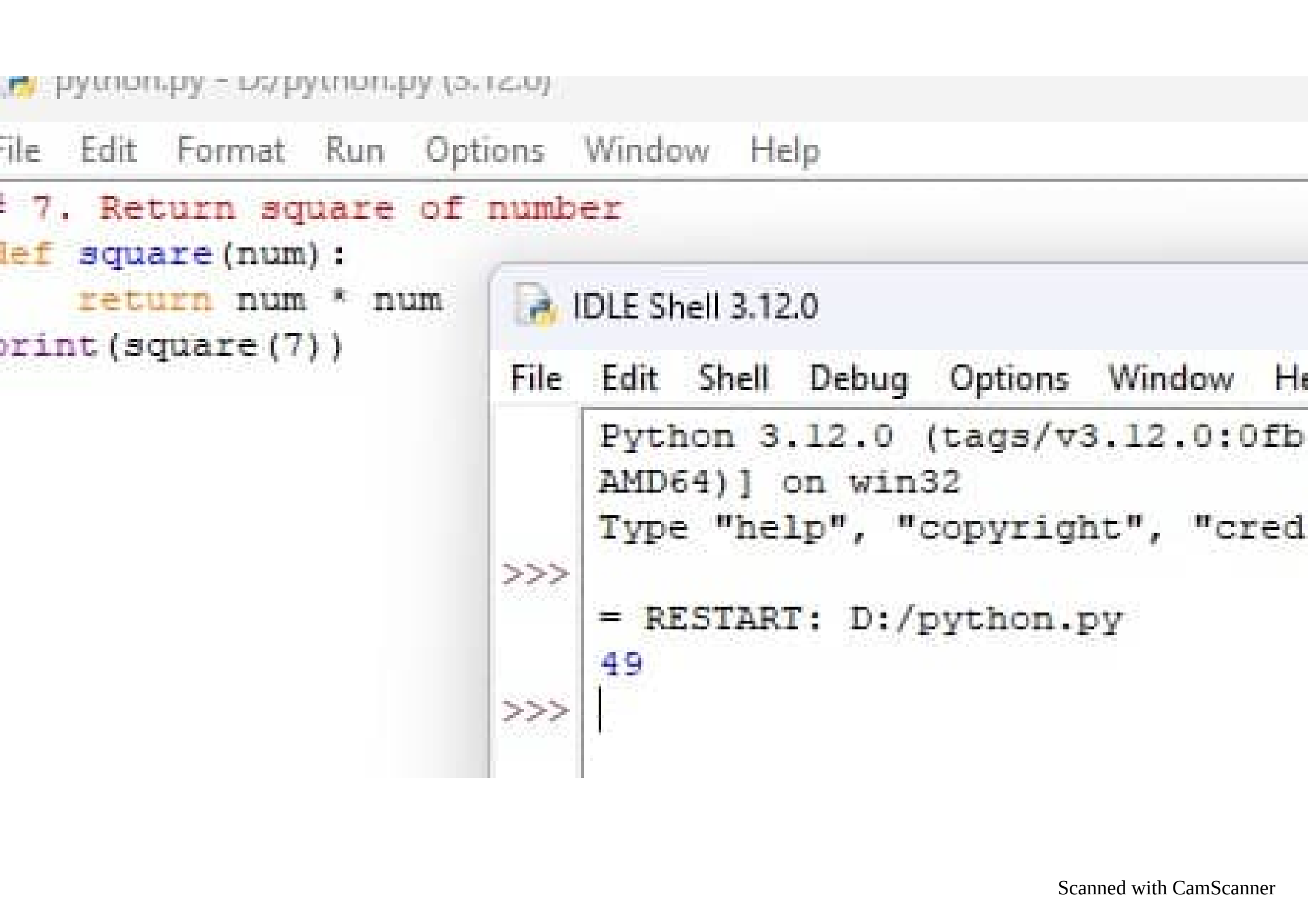
```
# 5. Determine age category
def age_category(age):
    if age < 18:
        return "Minor"
    elif age >= 18 and age < 60:
        return "Adult"
    else:
        return "Senior Citizen"
print(age_category(16))
```

IDLE Shell 3.12.0

File Edit Shell Debug Options Wi

```
Python 3.12.0 (tags/v3.12
AMD64)] on win32
Type "help", "copyright",
>>>
= RESTART: D:/python.py
Minor
>>>
```





File Edit Format Run Options Window Help

```
# 8. Compute area and circumference of circle
def circle_properties(radius):
    pi = 3.14159
    area = pi * radius * radius
    circumference = 2 * pi * radius
    return area, circumference
print(circle_properties(4))
```

IDLE Shell 3.12.0

File Edit Shell Debug Options Window Help

```
Python 3.12.0 (tags/v3.12.0:0fb18b0, Oct  2 20
AMD64)] on win32
Type "help", "copyright", "credits" or "licens
>>>
= RESTART: D:/python.py
(50.26544, 25.13272)
>>>
```

File Edit Format Run Options Window Help

```
# 9. Check pass/fail based on score
def check_pass(score):
    if score > 60:
        return "Pass"
    else:
        return "Fail"

print(check_pass(66))
```

IDLE Shell 3.12.0

File Edit Shell Debug Options Window Hel

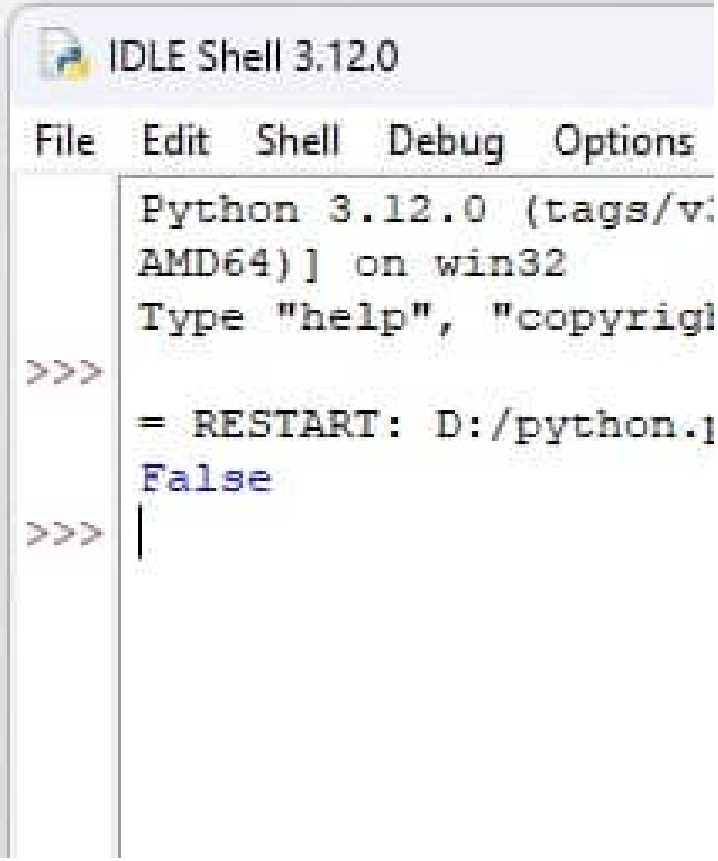
```
Python 3.12.0 (tags/v3.12.0:0fbl
AMD64)] on win32
Type "help", "copyright", "credi
>>>
= RESTART: D:/python.py
Pass
>>>
```

File Edit Format Run Options Window Help

```
# 10. Check if a number is prime (simple version)
def is_prime(num):
    if num < 2:
        return False

    # Check if num is divisible by any number from 2 to num-
    for i in range(2, num):
        if num % i == 0:
            return False  # Not a prime number

    return True  # Prime number
print(is_prime(4))
```



File Edit Format Run Options Window Help

```
# 11. Factorial using recursion
def factorial(n):
    if n == 0 or n == 1:
        return 1
    else:
        return n * factorial(n
print(factorial(5))
```

IDLE Shell 3.12.0

File Edit Shell Debug Options Window Help

```
Python 3.12.0 (tags/v3.12.0:0fb18b0, Oct
AMD64)] on win32
Type "help", "copyright", "credits" or "
>>>
= RESTART: D:/python.py
120
>>>
```

File Edit Format Run Options Window Help

```
# 1. Create and display list elements
student = ["Tahir", 44, "AI and Data Science", True]
for item in student:
    print(item)
```

IDLE Shell 3.12.0

File Edit Shell Debug Options Window Help

```
Python 3.12.0 (tags/v3.12.0:0fb18b0, Oct  2 2023,
AMD64)] on win32
Type "help", "copyright", "credits" or "license()"
>>>
= RESTART: D:/python.py
Tahir
44
AI and Data Science
True
>>>
```

```python
# 2. Separate data types into different lists
student = ["Tahir", 44, "AI and Data Science", True]

strings = []
numbers = []
booleans = []

for item in student:

    if type(item) == str:
        strings.append(item)


    elif type(item) == bool:
        booleans.append(item)


    elif type(item) == int or type(item) == float:
        numbers.append(item)

print("Strings:", strings)
print("Numbers:", numbers)
print("Booleans:", booleans)
```

IDLE Shell 3.12.0

File Edit Shell Debug Options Window Help

```
Python 3.12.0 (tags/v3.12.0:0fb18b0, Oct  2 2023,
AMD64)] on win32
Type "help", "copyright", "credits" or "license()"
>>>
= RESTART: D:/python.py
Strings: ['Tahir', 'AI and Data Science']
Numbers: [44]
Booleans: [True]
>>>
```

File Edit Format Run Options Window Help

```
# 3. Fruit list manipulation
fruits = ["apple", "raspberry", "pineapple", "cherry"]

# a. Check if "apple" is in list and get index
if "apple" in fruits:
    print("Apple found at index:", fruits.index("apple"))

# b. Replace "raspberry" and "pineapple" with "orange"
fruits[1:3] = ["orange"]
print(fruits)

# c. Insert "apricot" at index 2
fruits.insert(2, "apricot")
print(fruits)
```

IDLE Shell 3.12.0

File Edit Shell Debug Options Window Help

```
Python 3.12.0 (tags/v3.12.0:0fb18b0, Oct  2 2023
AMD64)] on win32
Type "help", "copyright", "credits" or "license
>>>
= RESTART: D:/python.py
Apple found at index: 0
['apple', 'orange', 'cherry']
['apple', 'orange', 'apricot', 'cherry']
>>>
```

File Edit Format Run Options Window Help

```
# 3. Fruit list manipulation
fruits = ["apple", "raspberry", "pineapple", "cherry"]

# a. Check if "apple" is in list and get index
if "apple" in fruits:
    print("Apple found at index:", fruits.index("apple"))

# b. Replace "raspberry" and "pineapple" with "orange"
fruits[1:3] = ["orange"]
print(fruits)

# c. Insert "apricot" at index 2
fruits.insert(2, "apricot")
print(fruits)


# d. Extend with vehicles
fruits.extend(["car", "bike", "aeroplane"])

print("Updated List:", fruits)
```

IDLE Shell 3.12.0

File Edit Shell Debug Options Window Help

```
Python 3.12.0 (tags/v3.12.0:0fb18b0, Oct  2 2023, 13:03:39) [MSC v.1935 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: D:/python.py
Apple found at index: 0
['apple', 'orange', 'cherry']
['apple', 'orange', 'apricot', 'cherry']
Updated List: ['apple', 'orange', 'apricot', 'cherry', 'car', 'bike', 'aeroplane
']
>>>
```

File Edit Format Run Options Window Help

```
Scores_list = [40, 89, 90, 89, 23, 90, 50]

unique_scores = []

for score in Scores_list:
    if score not in unique_scores:
        unique_scores.append(score)

unique_scores.sort()
unique_scores.reverse()

first_best = unique_scores[0]
second_best = unique_scores[1]

print("First Best Score:", first_best)
print("Second Best Score:", second_best)
```

IDLE Shell 3.12.0

File Edit Shell Debug Options Window Help

```
Python 3.12.0 (tags/v3.12.0:0fb18b0, Oct  2 202
AMD64)] on win32
Type "help", "copyright", "credits" or "license
>>>
= RESTART: D:/python.py
First Best Score: 90
Second Best Score: 89
>>>
```

File Edit Format Run Options Window Help

```
# 4. Get first and second best scores
Scores_list = [40, 89, 90, 89, 23, 90, 50]

unique_scores = []

for score in Scores_list:
    if score not in unique_scores:
        unique_scores.append(score)

unique_scores.sort()
unique_scores.reverse()

first_best = unique_scores[0]
second_best = unique_scores[1]

print("First Best Score:", first_best)
print("Second Best Score:", second_best)
```

IDLE Shell 3.12.0

File Edit Shell Debug Options Window Help

```
Python 3.12.0 (tags/v3.12.0:0fb18b0,
AMD64)] on win32
Type "help", "copyright", "credits"
>>>
= RESTART: D:/python.py
First Best Score: 90
Second Best Score: 89
>>>
```