

Assignment – 7.5

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1)INPUT:

```
ass_7.5.py > ...
1 # Bug: Mutable default argument
2 def add_item(item, items=[]):
3     items.append(item)
4     return items
5 print(add_item(1))
6 print(add_item(2))
```

```
ass_7.5.py > add_item
1 # Bug: Mutable default argument
2 def add_item(item, items=None):
3     if items is None:
4         items = []
5     items.append(item)
6     return items
7 print(add_item(1))
8 print(add_item(2))
```

OUTPUT:

```
ai_coding/ass_7.5.py  
[1]  
[2]
```

2)INPUT:

```
1 # Bug: Floating point precision issue  
2 def check_sum():  
3 → return (0.1 + 0.2) == 0.3  
   return abs((0.1 + 0.2) - 0.3) < 1e-10 # Use a small tolerance for floating point comparison  
4 print(check_sum())  
5
```

```
# Bug: Floating point precision issue  
def check_sum():  
    return abs((0.1 + 0.2) - 0.3) < 1e-10 # Use a small tolerance for floating point comparison  
print(check_sum())
```

OUTPUT:

```
True
```

3)INPUT:

```
ass_7.5.py > ...  
3 print(n)  
→ if n == 0:  
   return  
4 return countdown(n-1)  
5 countdown(5)
```

```
# Bug: No base case
def countdown(n):
    if n == 0:
        return
    print(n)
    countdown(n-1)
countdown(5)
```

OUTPUT:

```
5
4
3
2
1
```

4)INPUT:

```
ass_7.5.py > ...
2 def get_value():
3 data = {"a": 1, "b": 2}
4 → return data["c"]
   return data.get("c", "Key not found")
5 print(get_value())
```

```
ass_7.5.py > get_value
1 # Bug: Accessing non-existing key
2 def get_value():
3     data = {"a": 1, "b": 2}
4     return data.get("c", "Key not found")
5 print(get_value())
```

OUTPUT:

```
Key not found
```

5)INPUT:

```
ass_7.5.py > i
1 # Bug: Infinite loop
2 def loop_example():
3     i = 0
4     while i < 5:
5     print(i)
    i += 1
```

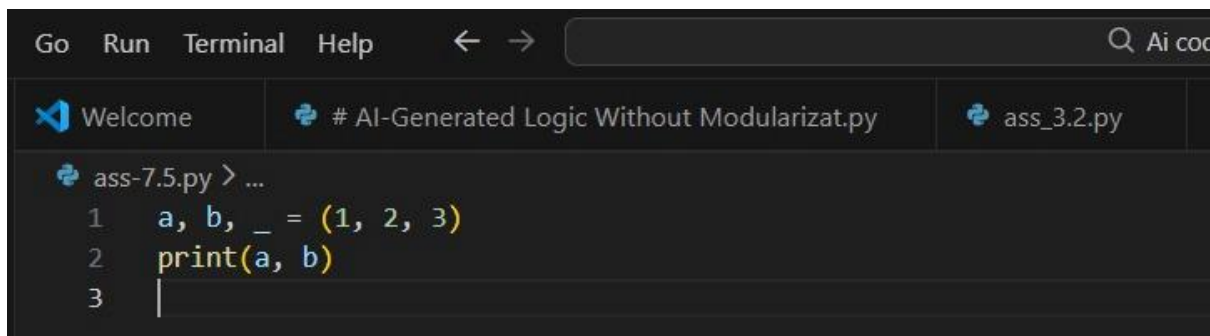
```
Go Run Terminal Help  Q Ai codin
Welcome # AI-Generated Logic Without Modularizat.py ass_3.2.py
ass-7.5.py > ...
1 def loop_example():
2     i = 0
3     while i < 5:
4         print(i)
5         i += 1 # Increment added
6
7 loop_example()
8
```

OUTPUT:

```
0
1
2
3
4
```

6)INPUT:

```
# Bug: Wrong unpacking
a, b = (1, 2, 3)
Expected Output: Correct unpacking or using _ for extra values.
```

A screenshot of a code editor interface. The top bar shows 'Go', 'Run', 'Terminal', and 'Help' menus, along with navigation arrows and a search icon labeled 'Ai cod'. Below the top bar, there are three tabs: 'Welcome', '# AI-Generated Logic Without Modularizat.py', and 'ass_3.2.py'. The active tab is '# AI-Generated Logic Without Modularizat.py'. The code editor shows a Python script with three lines: '1 a, b, _ = (1, 2, 3)', '2 print(a, b)', and '3 |'. The cursor is at the end of line 3.

```
Go Run Terminal Help  ← →  Q Ai cod
Welcome # AI-Generated Logic Without Modularizat.py ass_3.2.py
ass-7.5.py > ...
1 a, b, _ = (1, 2, 3)
2 print(a, b)
3 |
```

OUTPUT:

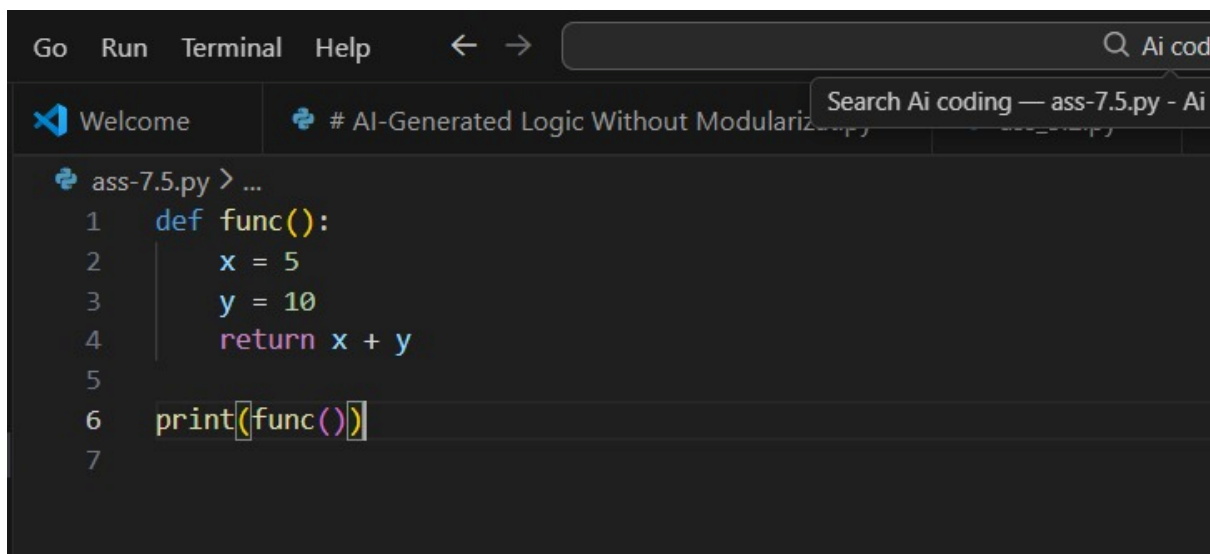
```
1 2
```

7)INPUT:

Bug: Mixed indentation

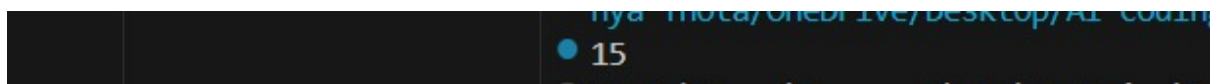
```
def func():  
    x = 5  
    y = 10  
    return x+y
```

Expected Output : Consistent indentation applied.

A screenshot of a code editor interface. The top bar shows 'Go', 'Run', 'Terminal', and 'Help' menus, along with a search bar containing 'Ai cod'. Below the top bar, there are two tabs: 'Welcome' and '# AI-Generated Logic Without Modulariz...'. The main editor area shows a file named 'ass-7.5.py' with the following code:

```
1 def func():  
2     x = 5  
3     y = 10  
4     return x + y  
5  
6 print(func())  
7
```

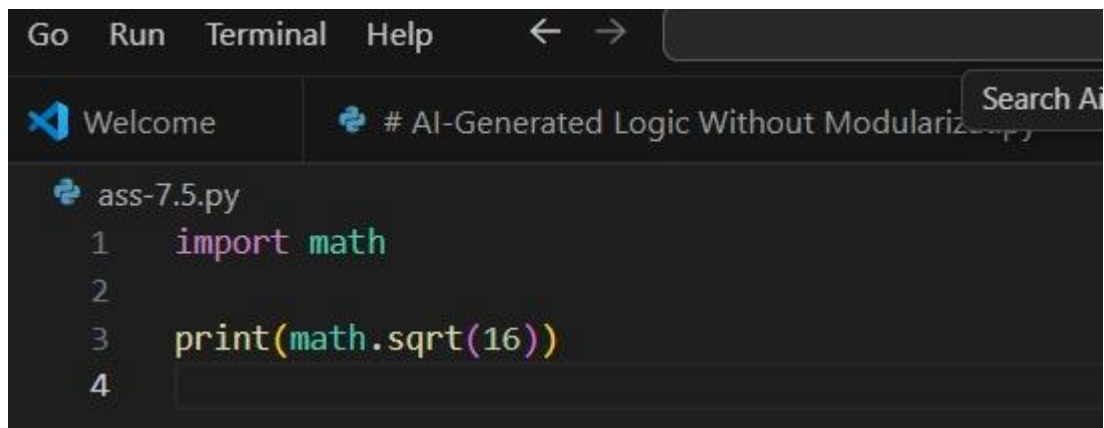
OUTPUT:

A screenshot of a terminal window. The top bar shows the file path 'C:\Users\...\.nvm\node\onedrive\Desktop\AI_coding\...'. The terminal output shows the number '15'.

8)INPUT:

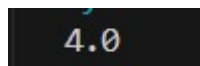
```
# Bug: Wrong import  
import maths  
print(maths.sqrt(16))
```

Expected Output: Corrected to import math

A screenshot of a code editor interface. The top menu bar includes 'Go', 'Run', 'Terminal', and 'Help'. Below the menu, there's a 'Welcome' tab and a file tab titled '# AI-Generated Logic Without Modularization.py'. A search bar is visible on the right. The main editor area shows a file named 'ass-7.5.py' with the following Python code:

```
1 import math
2
3 print(math.sqrt(16))
4
```

OUTPUT:

A small terminal window showing the output of the program, which is the number 4.0.

4.0