

AI ASSISTED CODING LAB - 7.5

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BATCH-12

Task 1 (Mutable Default Argument – Function Bug)

Task: Analyze given code where a mutable default argument causes unexpected behavior.
Use AI to fix it. # Bug: Mutable default argument def add_item(item, items=[]):
items.append(item) return

```
items print(add_item(1)) print(add_item(2))
```

Expected Output: Corrected function avoids shared list bug.

```
lab6.py > ...
1 def add_item(item, items=[]):
2     items.append(item)
3     return items
4 print(add_item(1))
5 print(add_item(2))

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

1
PS C:\Users\thota\OneDrive\Desktop\AIAC> & C:/Users/thota/AppData/Local/Programs/Python/Python313/python.exe c:/Users/thota/OneDrive/Desktop/AIAC/lab6.py
[1]
[1, 2]
PS C:\Users\thota\OneDrive\Desktop\AIAC>
```

Task 2 (Floating-Point Precision Error)

Task: Analyze given code where floating-point comparison fails. Use AI to correct with tolerance. # Bug: Floating point precision issue def check_sum(): return (0.1 + 0.2)

```
== 0.3 print(check_sum())
```

Expected Output: Corrected function

```
lab6.py > ...
1 import math
2
3 def check_sum():
4     return math.isclose(0.1 + 0.2, 0.3)
5 print(check_sum())

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

1
PS C:\Users\thota\OneDrive\Desktop\AIAC> & C:/Users/thota/AppData/Local/Programs/Python/Python313/python.exe c:/Users/thota/OneDrive/Desktop/AIAC/lab6.py
True
PS C:\Users\thota\OneDrive\Desktop\AIAC>
```

Task 3 (Recursion Error – Missing Base Case)

Task: Analyze given code where recursion runs infinitely due to missing base case.
Use AI to fix. # Bug: No base case def countdown(n): print(n) return countdown(n-1) countdown(5)

Expected Output : Correct recursion with stopping condition

```
problems output debug console terminal ports

PS C:\Users\thota\OneDrive\Desktop\AIAC> & C:/users/thota/AppData/Local/Programs/Python/Python311/python.exe c:/users/thota/OneDrive/Desktop/AIAC/lab6.py
5
4
3
2
1
0
PS C:\Users\thota\OneDrive\Desktop\AIAC>
```

Task 4 (Dictionary Key Error)

Task: Analyze given code where a missing dictionary key causes error. Use AI to fix it.

```
# Bug: Accessing non-existing key def
get_value(): data = {"a": 1, "b":
2} return data["c"] print(get_value())
```

Expected Output: Corrected with .get() or error handling.

```
problems output debug console terminal ports

PS C:\Users\thota\OneDrive\Desktop\AIAC> & C:/users/thota/AppData/Local/Programs/Python/Python311/python.exe c:/users/thota/OneDrive/Desktop/AIAC/lab6.py
Key not found
PS C:\Users\thota\OneDrive\Desktop\AIAC>
```

Task 5 (Infinite Loop – Wrong Condition)

Task: Analyze given code where loop never ends. Use AI to detect and fix it.

```
# Bug: Infinite loop def loop_example():
```

```
i = 0 while i < 5:
```

```
    print(i)
```

Expected Output: Corrected loop increments i.

```
palindrome.py lab6.py lab4.py lab2.py lab5.py lab1.py
lab6.py > ...
1 def loop_example():
2     i = 0
3     while i < 5:
4         print(i)
5         i += 1
6 loop_example()

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\thota\OneDrive\Desktop\AIAC> 
0
1
2
3
4
PS C:\Users\thota\OneDrive\Desktop\AIAC> 
```

Task 6 (Unpacking Error – Wrong Variables)

Task: Analyze given code where tuple unpacking fails. Use AI to fix it.

Bug: Wrong unpacking

a, b = (1, 2, 3)

Expected Output: Correct unpacking or using _ for extra values.

```
lab6.py > ...
1 a, b, _ = (1, 2, 3)

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\thota\OneDrive\Desktop\AIAC> & C:/Users/thota/AppData/Local/Programs/Python/Python313/python.exe c:/Users/thota/OneDrive/Desktop/AIAC/lab6.py
PS C:\Users\thota\OneDrive\Desktop\AIAC> 
```

Task 7 (Mixed Indentation – Tabs vs Spaces)

Task: Analyze given code where mixed indentation breaks execution. Use AI to fix it.

Bug: Mixed indentation def func(): x = 5 y = 10 return x+y

Expected Output : Consistent indentation applied.

```
lab6.py ?_
1 def func():
2     x = 5
3     y = 10
4     return x*y
5 print(func())

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\thota\OneDrive\Desktop\AIAC> & C:/users/thota/AppData/Local/Programs/Python/Python313/python.exe c:/users/thota/OneDrive/Desktop/AIAC/lab6.py
PS C:\Users\thota\OneDrive\Desktop\AIAC> & C:/users/thota/AppData/Local/Programs/Python/Python313/python.exe c:/users/thota/OneDrive/Desktop/AIAC/lab6.py
15
PS C:\Users\thota\OneDrive\Desktop\AIAC>
```

Task 8 (Import Error – Wrong Module Usage)

Task: Analyze given code with incorrect import. Use AI to fix.

```
# Bug: Wrong import import maths
print(maths.sqrt(16))    Expected    Output:
Corrected to import math
```

```
lab6.py
1 import math
2 print(math.sqrt(16))

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\thota\OneDrive\Desktop\AIAC> & C:/users/thota/AppData/Local/Programs/Python/Python313/python.exe c:/users/thota/OneDrive/Desktop/AIAC/lab6.py
PS C:\Users\thota\OneDrive\Desktop\AIAC> & C:/users/thota/AppData/Local/Programs/Python/Python313/python.exe c:/users/thota/OneDrive/Desktop/AIAC/lab6.py
4.0
PS C:\Users\thota\OneDrive\Desktop\AIAC>
```