

Assignment-7.4

2303A51089

Batch-02

Task-1:

The screenshot shows a Jupyter Notebook interface with a dark theme. The code cell contains Python code for defining a function `add_item` and printing its results. The output cell shows the execution of the code and the resulting list outputs.

```
Mutable.py > ...
1 #2303A51089
2
3 def add_item(item, items = []):
4     items.append(item)
5     return items
6 print(add_item(10), [40, 50, 60])
7 print(add_item(20))
8 print(add_item(30))
9
10 #fixed code:
11 print()
12 def add_item(item, items = None):
13     if items is None:
14         items = []
15     items.append(item)
16     return items
17 print(add_item(10), [40, 50, 60])
18 print(add_item(20))
19 print(add_item(30))
20 |
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted> conda activate base
PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted> & C:/Users/Rishi/anaconda/python.exe "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py"
[10] [40, 50, 60]
[10, 20]
[10, 20, 30]

[10] [40, 50, 60]
[20]
[30]
PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted>
```

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Ln 20, Col 1 Spaces: 4 UTF-8 CRLF { } Python 3.13.5 (base) Go Live

Task-2:

```
1  #2303A51089
2
3  #task 2 (Floating-point precision Error)
4  def add_two(a, b):
5  |  return (a+b) ==0.3
6  print(add_two(0.1, 0.2))
7
8  #fix the above code so that it correctly adds two numbers and prints
9  def add_two(a, b):
10 |  return round(a+b, 10) == 0.3
11 print(add_two(0.1, 0.2))
12 |
```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS

table.py
False
True
PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted>

Activate Windows Go to Settings to activate Windows Python Python Python

Task-3:

```
1  #2303A51089
2
3  #task 3 (Recursion Error - missing base case)
4  def countdown(n):
5  |  print(n)
6  |  return countdown(n - 1)
7  countdown(5)
8
9  #fix the above code so that it correctly counts down from n to 0
10 def countdown(n):
11 |  print(n)
12 |  if n <= 0:
13 |  |  return n
14 |  return countdown(n - 1)
15 countdown(5)
```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS

-992
-993
Traceback (most recent call last):
File "c:/Users/Rishi/Documents/Naga Rishik\AI assisted\Mutable.py", line 7, in <module>
 countdown(5)
~~~~~^~  
File "c:/Users/Rishi/Documents/Naga Rishik\AI assisted\Mutable.py", line 6, in countdown  
 return countdown(n - 1)  
File "c:/Users/Rishi/Documents/Naga Rishik\AI assisted\Mutable.py", line 6, in countdown  
 return countdown(n - 1)  
File "c:/Users/Rishi/Documents/Naga Rishik\AI assisted\Mutable.py", line 6, in countdown  
 return countdown(n - 1)  
[Previous line repeated 996 more times]  
return countdown(n - 1)  
[Previous line repeated 996 more times]  
return countdown(n - 1)

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### Task-4:

```
1 #2303A51089
2
3 #task 4 (Dictionary key error)
4 def get_value():
5     dat = {"a": 1, "b": 2}
6     return dat["c"]
7 print(get_value())
8 #correct the function to handle the key error
9 def get_value():
10    data = {"a": 1, "b": 2}
11    try:
12        return data["c"]
13    except KeyError:
14        return "Key 'c' not found in the dictionary."|
```

PROBLEMS 2 OUTPUT DEBUG CONSOLE TERMINAL PORTS

RecursionError: maximum recursion depth exceeded  
PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted> & C:/Users/Rishi/anaconda/python.exe "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py"  
Traceback (most recent call last):  
File "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py", line 7, in <module>  
print(get\_value())  
~~~~~^M  
File "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py", line 6, in get_value
return data["c"]
~~~~~^M  
NameError: name 'data' is not defined. Did you mean: 'dat'?  
PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted> []

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Ln 14, Col 54 Spaces: 4 UTF-8 CRLF () Python 3.13.5 (base) (Go Live) 🔍

## Task-5:

```
1 #2303A51089
2
3 #task 5 (Infinite loop-Wrong condition)
4 def loop_example():
5     i = 0
6     while i < 5:
7         print(i)
8         i += 1
9 loop_example()
10
11 #fix the above code so that it correctly loops from 0 to 4 and prints the numbers
12 def loop_example():
13     i = 0
14     while i < 5:
15         print(i)
16         i += 1
17 loop_example()|
```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS

table.py"
0
1
2
3
4
0
1
2
3
4
PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted> []

Activate Windows  
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Ln 17, Col 15 Spaces: 4 UTF-8 CRLF () Python 3.13.5 (base) (Go Live) 🔍

## Task-6:

```
1 #2303A51089
2
3 #task 6 (unpacking error - wrong variable)
4 a, b =(1, 2, 3)
5 print(a,b)
6 #fix the above code so that it correctly unpacks the tuple into variables and prints them
7 a, b, c = (1, 2, 3)
8 print(a, b, c)
```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted> & C:/Users/Rishi/anaconda/python.exe "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py"

Traceback (most recent call last):  
 File "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py", line 4, in <module>  
 a, b =(1, 2, 3)  
 ^^^^  
ValueError: too many values to unpack (expected 2)  
PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted>

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## Task-7:

```
1 #2303A51089
2
3 #task 7 (mixed indentation - tabs vs spaces)
4 def fun():
5     x = 5
6     y = 10
7     return x + y
8 print(func())
9
10 #fix the above code so that it correctly uses consistent indentation and prints the result
11 def func():
12     x = 5
13     y = 10
14     return x + y
15 print(func())
16
```

PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted> & C:/Users/Rishi/anaconda/python.exe "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py"

File "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py", line 6  
 y = 10  
IndentationError: unexpected indent  
PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted>

Activate Windows  
Go to Settings to activate Windows.

Ln 16, Col 1 Spaces: 4 UTF-8 CRLF () Python 3.13.5 (base) Go Live

## Task-8:

```
1 #2303A51089
2
3 #task 8 (Import error - wrong module usage)
4 import maths
5 print(maths.sqrt(16))
6
7 #fix the above code so that it correctly imports the math module and uses the sqrt of 16
8 import math
9 print(math.sqrt(16))
10 |
```

PROBLEMS 2 OUTPUT DEBUG CONSOLE TERMINAL PORTS

table.py" Traceback (most recent call last): File "c:/Users/Rishi/Documents\Naga Rishik\AI assisted\Mutable.py", line 4, in <module> import maths ModuleNotFoundError: No module named 'maths' PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted> []

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Ln 10, Col 1 Spaces: 4 UTF-8 CRLF [ ] Python 3.13.5 (base) (i) Go Live ⚡

### Task-9:

```
1 #2303A51089
2
3 #task 9 (unreachable code-return inside loop)
4 def total(numbers):
5     for n in numbers:
6         return n
7 print(total([1, 2, 3]))
8 #correct the function to return the sum of all numbers in the list
9 def total(numbers):
10    total_sum = 0
11    for n in numbers:
12        total_sum += n
13    return total_sum
14 print(total([1, 2, 3]))
```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted> & C:/Users/Rishi/anaconda/python.exe "c:/Users/Rishi/Documents\Naga Rishik\AI assisted\Mutable.py"
1
6
PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted> []

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Ln 14, Col 24 Spaces: 4 UTF-8 CRLF [ ] Python 3.13.5 (base) (i) Go Live ⚡

### Task-10:

```
1 #2303A51089
2
3 #task 10 (Name Error -Undefined Variable)
4 def calculate_area():
5     return length * width
6 print(calculate_area())
7 #fix the above code so that it correctly calculates the area using defined variables and prints the result
8 def calculate_area(length, width):
9     return length * width
10 print(calculate_area(5, 10))
11
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted & C:/Users/Rishi/miniconda3/python.exe "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py"

Traceback (most recent call last):  
File "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py", line 6, in <module>  
 print(calculate\_area())  
 ^~~~~~  
File "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py", line 5, in calculate\_area  
 return length \* width  
 ^~~~~~

NameError: name 'length' is not defined  
PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted>

Activate Windows  
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Ln 11, Col 1 Spaces:4 UTF-8 CRLF { } Python 3.13.5 (base) ⚡ Go Live ⌂

## Task-11:

```
1 #2303A51089
2
3 #task 11 (Type error-Mixing data types Incorrectly)
4 def add_values():
5     return 5 + "10"
6 print(add_values())
7 #fix the above code so that it correctly adds the two values and prints the result
8 def add_values():
9     return 5 + int("10")
10 print(add_values())
11
```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted & C:/Users/Rishi/miniconda3/python.exe "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py"

Traceback (most recent call last):  
File "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py", line 6, in <module>  
 print(add\_values())  
 ^~~~~~  
File "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py", line 5, in add\_values  
 return 5 + "10"  
 ^~~~~~

NameError: name 'length' is not defined  
TypeError: unsupported operand type(s) for +: 'int' and 'str'  
PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted>

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Ln 11, Col 1 Spaces:4 UTF-8 CRLF { } Python 3.13.5 (base) ⚡ Go Live ⌂

## Task-12:

```
1 #2303A51089
2
3 #task 12 (Type error - string + list concatenation)
4 def combine():
5     return 'Numbers: ' + [1, 2, 3]
6 print(combine())
7 #fix the above code so that it correctly combines the string and list and prints the result
8 def combine():
9     return 'Numbers: ' + str([1, 2, 3])
10 print(combine())

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS + v ... | 🔍 X
TypeError: unsupported operand type(s) for +: 'int' and 'str'
PS C:\Users\Rishi\Documents\Waga Rishik\AI assisted & C:/Users/Rishi/miniconda3/python.exe "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py"
Traceback (most recent call last):
File "c:/Users/Rishi/Documents\Waga Rishik\AI assisted\Mutable.py", line 6, in <module>
    print(combine())
    ~~~~~^
File "c:/Users/Rishi/Documents\Waga Rishik\AI assisted\Mutable.py", line 5, in combine
 return 'Numbers: ' + [1, 2, 3]
    ~~~~~~^~~~~~^
TypeError: can only concatenate str (not "list") to str
PS C:\Users\Rishi\Documents\Waga Rishik\AI assisted>

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Ln 8, Col 15 (59 selected) Spaces: 4 UTF-8 CRLF { } Python 🐍 3.13.5 (base) ⓘ Go Live ⚙️
```

### Task-13:

```
1 #2303A51089
2
3 #task 13(Type error-multiplying string by float)
4 def repeat_text():
5     return "Hello " * 2.5
6 print(repeat_text())
7 #fix the above code so that it correctly repeats the string
8 def repeat_text():
9     return "Hello " * int(2.5)
10 print(repeat_text())

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS + v ... | 🔍 X
TypeError: can only concatenate str (not "list") to str
PS C:\Users\Rishi\Documents\Waga Rishik\AI assisted & C:/Users/Rishi/miniconda3/python.exe "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/Mutable.py"
Traceback (most recent call last):
File "c:/Users/Rishi/Documents\Waga Rishik\AI assisted\Mutable.py", line 6, in <module>
    print(repeat_text())
    ~~~~~^
File "c:/Users/Rishi/Documents\Waga Rishik\AI assisted\Mutable.py", line 5, in repeat_text
 return "Hello " * 2.5
    ~~~~~~^~~~~~^
TypeError: can't multiply sequence by non-int of type 'float'
PS C:\Users\Rishi\Documents\Waga Rishik\AI assisted>

Activate Windows
Go to Settings to activate Windows.
```

### Task-14:

```
1 #2303A51089
2
3 #task 14(type error-adding none to integer)
4 def compute():
5     value = None
6     return value + 10
7 print(compute())
8 #correct the function to handle None type
9 def compute():
10    value = None
11    if value is None:
12        value = 0
13    return value + 10
14 print(compute())
15
16
17
18 |
```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS

File "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/assignments.py", line 7, in <module>  
print(compute(),  
~~~~~^)  
File "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/assignments.py", line 6, in compute
return value + 10
~~~~~^  
TypeError: unsupported operand type(s) for +: 'NoneType' and 'int'  
PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted> [ ]

Activate Windows  
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Ln 18, Col 1 Spaces: 4 UTF-8 CRLF { } Python 3.13.5 (base) ⓘ Go Live ⌂

## Task-15:

```
1 #2303A51089
2
3 #task 15 (Type error-input treated as string instead of Number)
4 def sum_two_numbers():
5     a=input("Enter first number: ")
6     b=input("Enter second number: ")
7     return a + b
8 print(sum_two_numbers())
9 #correct the function to return the correct result
10 def sum_two_numbers():
11     a=float(input("Enter first number: "))
12     b=float(input("Enter second number: "))
13     return a + b
14 print(sum_two_numbers())
15
16
17
```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS

assignments.py"  
Enter first number: & C:/Users/Rishi/miniconda3/python.exe "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/assignments.py"  
Enter second number: & C:/Users/Rishi/miniconda3/python.exe "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/assignments.py"  
& C:/Users/Rishi/miniconda3/python.exe "c:/Users/Rishi/Documents/Naga Rishik/AI assisted/assignments.py"& C:/Users/Rishi/miniconda3/python.exe  
"c:/Users/Rishi/Documents/Naga Rishik/AI assisted/assignments.py"  
Enter first number: 5  
Enter second number: 6  
11.0  
PS C:\Users\Rishi\Documents\Naga Rishik\AI assisted> [ ]

Activate Windows  
Go to Settings to activate Windows.

Ln 15, Col 1 Spaces: 4 UTF-8 CRLF { } Python 3.13.5 (base) ⓘ

