

# ASSIGNMENT - 7.4

---

**Name :** Aravind Reddy

**Hall Ticket No :** 2303a51027

**Batch No :** 01

**Course Title :** AI Assisted Coding

**Instructor's Name :** Mr. S Naresh Kumar

---

## Task 1 :

```
# Task 1:
def add_item(item, items = []):
    items.append(item)
    return items

print(add_item(10), [40, 50, 60])
print(add_item(20))
print(add_item(30))

# Fixed code:
print()
def add_item(item, items = None):
    if items is None:
        items = []
    items.append(item)
    return items

print(add_item(10), [40, 50, 60])
print(add_item(20))
print(add_item(30))
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER

```
/usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assisted Coding/Assignments/Assignment 7.4/Program-6.py" > Assignment - 07.py
(base) + AI Assisted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assisted Coding/Assignments/Assignment 7.4/Assignment - 07.py" ...
[10] [40, 50, 60]
[10, 20]
[10, 20, 30]

[10] [40, 50, 60]
[20]
[30]
(base) + AI Assisted Coding
```

---

## Task 2 :

Welcome    Program-6.py    Assignment - 07.py ×

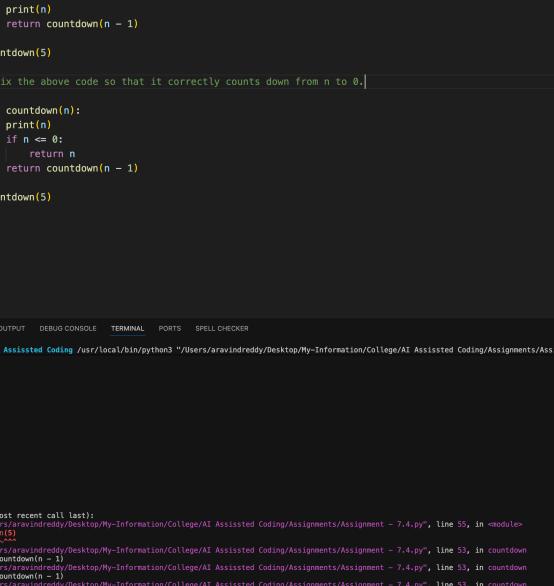
Assignments > Assignment - 07.py > ...

```
28
29 # Task 2 (Floating-Point Precision Error)
30 def add_two(a, b):
31     return (a + b) == 0.3
32
33 print(add_two(0.1, 0.2))
34
35 # fix the above code so that it correctly adds two numbers and prints
36
37 def add_two(a, b):
38     return round(a + b, 10) == 0.3
39
40 print(add_two(0.1, 0.2))
```

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS    SPELL CHECKER

```
/usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignment-7.py"
● (base) + AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignment-7.py"
False
True
True
False
● (base) + AI Assissted Coding
```

### **Task 3 :**



The screenshot shows a terminal window with the following details:

- File Path:** /Users/aravindreddy/Desktop/My-Information/College/AI Assisted Coding/Assignments/Assignment - 7.4.py
- Code Content:**

```
49 # Task 3 (Recursion Error - Missing Base Case)
50
51 def countdown(n):
52     print(n)
53     return countdown(n - 1)
54
55 countdown(5)
56
57 # fix the above code so that it correctly counts down from n to 0.
58
59 def countdown(n):
60     print(n)
61     if n <= 0:
62         return n
63     return countdown(n - 1)
64
65 countdown(5)
```
- Output:**

```
(base) • AI Assisted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assisted Coding/Assignments/Assignment - 7.4.py"
-976
-975
-976
-978
-979
-980
-981
-982
-983
-984
-985
-986
-987
-988
-989
-990
-991
-992
-993
-994
-995
-996
-997
-998
-999
-999
Traceback (most recent call last):
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assisted Coding/Assignments/Assignment - 7.4.py", line 55, in <module>
    countdown(5)
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assisted Coding/Assignments/Assignment - 7.4.py", line 53, in countdown
    return countdown(n - 1)
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assisted Coding/Assignments/Assignment - 7.4.py", line 55, in countdown
    return countdown(n - 1)
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assisted Coding/Assignments/Assignment - 7.4.py", line 53, in countdown
    return countdown(n - 1)
...
[Previous line repeated 996 more times]
RecursionError: maximum recursion depth exceeded
```
- Environment:** (base) • AI Assisted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assisted Coding/Assignments/Assignment - 7.4.py"

## Task 4 :

>Welcome    Program-6.py    Assignment - 7.4.py •

Assignments > Assignment - 7.4.py > ...

```
67
68 # Task 4 (Dictionary Key Error)
69
70 def get_value():
71     data = {"a": 1, "b": 2}
72     return data["c"]
73
74 print(get_value())
75
76 # fix the above code so that it correctly retrieves the value for key "c" without raising an error.
77
78 def get_value():
79     data = {"a": 1, "b": 2}
80     return data.get("c", "Key not found")
81
82 print(get_value())
```

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS    SPELL CHECKER

```
/usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
(base) → AI Assisted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
Traceback (most recent call last):
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 74, in <module>
    print(get_value())
           ^
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 72, in get_value
    return data["c"]
           ^
KeyError: 'c'
(base) → AI Assisted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
Key not found
◆ (base) → AI Assisted Coding
```

## Task 5 :

[Welcome](#)[Program-6.py](#)[Assignment - 7.4.py](#) ●Assignments > [Assignment - 7.4.py](#) > ...

```
84
85 # Task 5 (Infinite Loop – Wrong Condition)
86
87 def loop_example():
88     i = 0
89     while i < 5:
90         print(i)
91         i += 1
92 loop_example()
93
94 # fix the above code so that it correctly loops from 0 to 4 and prints the numbers.
95 def loop_example():
96     i = 0
97     while i < 5:
98         print(i)
99         i += 1
100
101 loop_example()
```

[PROBLEMS](#)   [OUTPUT](#)   [DEBUG CONSOLE](#)   [TERMINAL](#)   [PORTS](#)   [SPELL CHECKER](#)

```
/usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7
● (base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Cod
0
1
2
3
4
❖ (base) → AI Assissted Coding
```

## Task 6 :

Welcome    Program-6.py    Assignment - 7.4.py ×

Assignments > Assignment - 7.4.py > ...

```
102
103 # Task 6 (Unpacking Error – Wrong Variables)
104
105 a, b = (1, 2, 3)
106
107 print(a, b)
108
109 # fix the above code so that it correctly unpacks the tuple into variables and prints them.
110
111 a, b, c = (1, 2, 3)
112
113 print(a, b, c)
```

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS    SPELL CHECKER

```
/usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
(base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignment - 7.4.py"
Traceback (most recent call last):
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 105, in <module>
    a, b = (1, 2, 3)
           ^^^^
ValueError: too many values to unpack (expected 2)
(base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignment - 7.4.py"
  1 2 3
(base) → AI Assissted Coding
```

## Task 7 :

The screenshot shows a code editor interface with three tabs at the top: "Welcome", "Program-6.py", and "Assignment - 7.4.py 1 X". The current file is "Assignment - 7.4.py". The code in the editor is as follows:

```
115
116
117 # Task 7 (Mixed Indentation – Tabs vs Spaces)
118
119 def func():
120     x = 5
121     y = 10
122
123     return x + y
124
125 print(func())
126
127 # fix the above code so that it correctly uses consistent indentation and prints the result.
128 def func():
129     x = 5
130     y = 10
131
132     return x + y
133
134 print(func())
```

Below the code editor is a terminal window showing the execution of the script:

```
/usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
(base) ✘ AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 121
    y = 10
IndentationError: unexpected indent
(base) ✘ AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 15
    y = 10
IndentationError: unexpected indent
(base) ✘ AI Assissted Coding
```

## Task 8 :

>Welcome    Program-6.py    Assignment - 7.4.py 1 •

Assignments > Assignment - 7.4.py

```
136
137 # Task 8 (Import Error – Wrong Module Usage)
138
139 import maths
140 print(maths.sqrt(16))
141
142 # fix the above code so that it correctly imports the math module and prints the square root of 16.
143
144 import math
145 print(math.sqrt(16))
```

PROBLEMS 1    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS    SPELL CHECKER

```
/usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
(base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
Traceback (most recent call last):
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 139, in <module>
    import maths
ModuleNotFoundError: No module named 'maths'
(base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
4.0
(base) → AI Assissted Coding
```

## Task 9 :

```
147
148
149
150 # Task 9 (Unreachable Code – Return Inside Loop)
151
152 def total(numbers):
153     for n in numbers:
154         return n
155
156 print(total([1,2,3]))
157
158 # fix the above code so that it correctly calculates the total of the numbers in the list and prints the result.
159
160 def total(numbers):
161     total_sum = 0
162     for n in numbers:
163         total_sum += n
164     return total_sum
165
166 print(total([1,2,3]))
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS   SPELL CHECKER

```
/usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
● (base) ➔ AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
1
6
❖ (base) ➔ AI Assissted Coding
```

## Task 10 :

The screenshot shows a code editor interface with a dark theme. At the top, there are tabs for "Welcome", "Program-6.py", and "Assignment - 7.4.py 2". Below the tabs, the file path "Assignments > Assignment - 7.4.py > ..." is displayed. The code itself is as follows:

```
162     #     for n in numbers:  
163     #         total_sum += n  
164     #     return total_sum  
165  
166 # print(total([1,2,3]))  
167  
168  
169 # Task 10 (Name Error – Undefined Variable)  
170  
171 def calculate_area():  
172     return length * width| import width  
173  
174 print(calculate_area())  
175  
176 # fix the above code so that it correctly calculates the area using defined variables and prints the result.  
177  
178 def calculate_area(length, width):  
179     return length * width  
180  
181 print(calculate_area(5, 10))
```

In the code editor, line 172 is highlighted with a blue background, and the cursor is positioned at the end of the line. The word "import" is also highlighted in purple. Below the code editor, there is a navigation bar with links: PROBLEMS (2), OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, and SPELL CHECKER. The TERMINAL tab is currently selected. The terminal window below shows the following output:

```
/usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"  
(base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"  
Traceback (most recent call last):  
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 174, in <module>  
    print(calculate_area())  
           ^~~~~~  
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 172, in calculate_area  
    return length * width  
           ^~~~~~  
NameError: name 'length' is not defined  
● (base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"  
50  
❖ (base) → AI Assissted Coding
```

## Task 11 :

>Welcome    Program-6.py    Assignment - 7.4.py X

Assignments > Assignment - 7.4.py > ...

```
182
183 # Task 11 (Type Error – Mixing Data Types Incorrectly)
184
185 def add_values():
186     return 5 + "10"
187
188 print(add_values())
189
190 # fix the above code so that it correctly adds the two values and prints the result.
191
192 def add_values():
193     return 5 + int("10")
194
195 print(add_values())
```

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS    SPELL CHECKER

```
/usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
(base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
Traceback (most recent call last):
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 188, in <module>
    print(add_values())
           ~~~~~^~^
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 186, in add_values
    return 5 + "10"
           ~~~~~^~^
TypeError: unsupported operand type(s) for +: 'int' and 'str'
(base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
15
(base) → AI Assissted Coding
```

## Task 12 :

Welcome    Program-6.py    Assignment - 7.4.py

Assignments > Assignment - 7.4.py > ...

```
197
198
199
200 # Task 12 (Type Error – String + List Concatenation)
201
202 def combine():
203     return 'Numbers : ' + [1, 2, 3]
204     return 'Numbers : ' + str([1, 2, 3])
205 print(combine())
206
207 # fix the above code so that it correctly combines the string and list and prints the result.
208
209 def combine():
210     return 'Numbers : ' + str([1, 2, 3])
211
212 print(combine())
213
```

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS    SPELL CHECKER

```
/usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
(base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignment - 7.4.py"
Traceback (most recent call last):
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 205, in <module>
    print(combine())
           ^
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 203, in combine
    return 'Numbers : ' + [1, 2, 3]
           ^~~~~~^~~~~~
TypeError: can only concatenate str (not "list") to str
● (base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignment - 7.4.py"
  Numbers : [1, 2, 3]
○ (base) → AI Assissted Coding
```

### Task 13 :

Welcome    Program-6.py    Assignment - 7.4.py X

Assignments > Assignment - 7.4.py > ...

```
213
214
215 # Task 13 (Type Error – Multiplying String by Float)
216
217 def repeat_text():
218     return "Hello" * 2.5
219
220 print(repeat_text())
221
222 # fix the above code so that it correctly repeats the string and prints the result.
223
224 def repeat_text():
225     return "Hello" * int(2.5)
226
227 print(repeat_text())
```

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS    SPELL CHECKER

```
/usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
(base) + AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/
Traceback (most recent call last):
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 220, in <module>
    print(repeat_text())
           ~~~~~~^~~~~~
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 218, in repeat_text
    return "Hello" * 2.5
           ~~~~~~^~~~~~
TypeError: can't multiply sequence by non-int of type 'float'
(base) + AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/
HelloHello
(base) + AI Assissted Coding
```

## Task 14 :

The screenshot shows a code editor interface with a dark theme. At the top, there are tabs for 'Welcome', 'Program-6.py', and 'Assignment - 7.4.py X'. Below the tabs, the file content is displayed:

```
229
230
231 # Task 14 (Type Error – Adding None to Integer)
232
233 def compute():
234     value = None
235     return value + 10
236
237 print(compute())
238
239 # fix the above code so that it correctly computes the result without ra
240
241 def compute():
242     value = None
243     if value is None:
244         value = 0
245     return value + 10
246
247 print(compute())
```

Below the code editor, there is a terminal window showing the execution of the code and the resulting error:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER

/usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignment - 7.4.py"
(base) ✘ AI Assisted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignment - 7.4.py"
Traceback (most recent call last):
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 235, in <module>
    print(compute())
           ^^^^^^
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 245, in compute
    return value + 10
           ^^^^^^
TypeError: unsupported operand type(s) for +: 'NoneType' and 'int'
(base) ✘ AI Assisted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignment - 7.4.py"
10
(base) ✘ AI Assisted Coding
```

---

## Task 15 :

Welcome Program-6.py Assignment - 7.4.py

Assignments > Assignment - 7.4.py > ...

```
249
250 # Task 15 (Type Error – Input Treated as String Instead of Number)
251
252 def sum_two_numbers():
253     a = input("Enter first number: ")
254     b = input("Enter second number: ")
255     return a + b
256
257 print(sum_two_numbers())
258
259 # fix the above code so that it correctly sums the two numbers and prints the result.
260
261 def sum_two_numbers():
262     a = float(input("Enter first number: "))
263     b = float(input("Enter second number: "))
264     return a + b
265
266 print(sum_two_numbers())
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER

```
/usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
● (base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
Enter first number: 5
Enter second number: 6
56
Enter first number: 5
Enter second number: 6
11.0
○ (base) → AI Assissted Coding []
```