ASSIGNMENT - 7.4

Name : Aravind Reddy
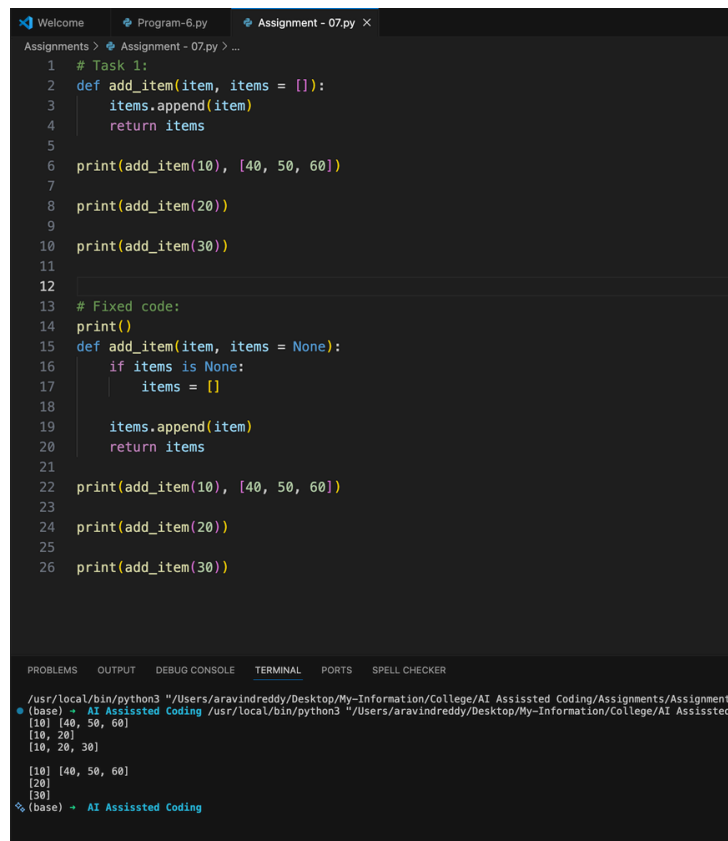
Hall Ticket No : 2303a51027

Batch No : 01

Course Title : AI Assisted Coding

Instructor's Name : Mr. S Naresh Kumar

Task 1 :

Task 2 :

```python
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/Assignm
(base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/Colle
False
True
(base) → AI Assissted Coding
```

Task 3 :

```python
48
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)
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   **TERMINAL**   PORTS   SPELL CHECKER

```
(base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
-976
-977
-978
-979
-980
-981
-982
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-991
-992
-993
Traceback (most recent call last):
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 55, in <module>
    countdown(5)
    ^^^^^^^^^^^^
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 53, in countdown
    return countdown(n - 1)
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py", line 53, in countdown
    return countdown(n - 1)
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted 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
(base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment - 7.4.py"
5
4
3
2
1
0
```

Task 4 :

```python
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 Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assign
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 Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assign
Key not found
(base) → AI Assissted Coding
```

Task 5 :

```python
84
85   # Task 5 (Infinite Loop — Wrong Condition)
86
87   def loop_example():
88       i = 0
89       while i < 5:
90           print(i)
             i += 1
91
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 :

```
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/Assignme
  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/Assignme
  1 2 3
✧ (base) → AI Assissted Coding
```

Task 7 :

```python
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())
```

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/A
   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/A
  15
✧ (base) →  AI Assissted Coding
```

Task 8 :

```python
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/Assign
  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/Assign
  4.0
✧ (base) → AI Assissted Coding
```

Task 9 :

```python
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 :

```
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))
```

Task 11 :

```python
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/Ass:
  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/Ass:
  15
○ (base) → AI Assissted Coding
```

Task 12 :

```python
197
198
199
200    # Task 12 (Type Error — String + List Concatenation)
201
202    def combine():
203        return 'Numbers : ' + [1, 2, 3]
           return 'Numbers : ' + str([1, 2, 3])
204
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/Assignmen
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/Assignmen
Numbers : [1, 2, 3]
(base) → AI Assissted Coding
```
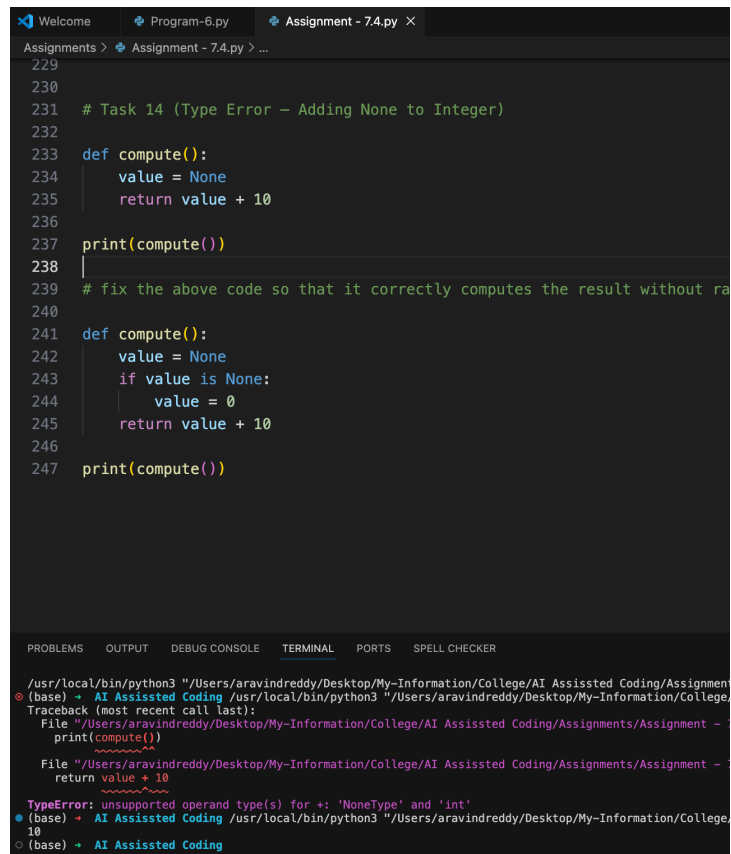
Task 13 :

```python
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 :

```
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())
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS   SPELL CHECKER

```
/usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignment
(base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College,
Traceback (most recent call last):
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment -
    print(compute())
          ^^^^^^^
  File "/Users/aravindreddy/Desktop/My-Information/College/AI Assissted Coding/Assignments/Assignment -
    return value + 10
           ~~~~~~^~~~
TypeError: unsupported operand type(s) for +: 'NoneType' and 'int'
(base) → AI Assissted Coding /usr/local/bin/python3 "/Users/aravindreddy/Desktop/My-Information/College,
10
(base) → AI Assissted Coding
```

Task 15 :

```python
#  Task 15 (Type Error — Input Treated as String Instead of Number)

def sum_two_numbers():
    a = input("Enter first number: ")
    b = input("Enter second number: ")
    return a + b

print(sum_two_numbers())

# fix the above code so that it correctly sums the two numbers and prints the result.

def sum_two_numbers():
    a = float(input("Enter first number: "))
    b = float(input("Enter second number: "))
    return a + b

print(sum_two_numbers())
```