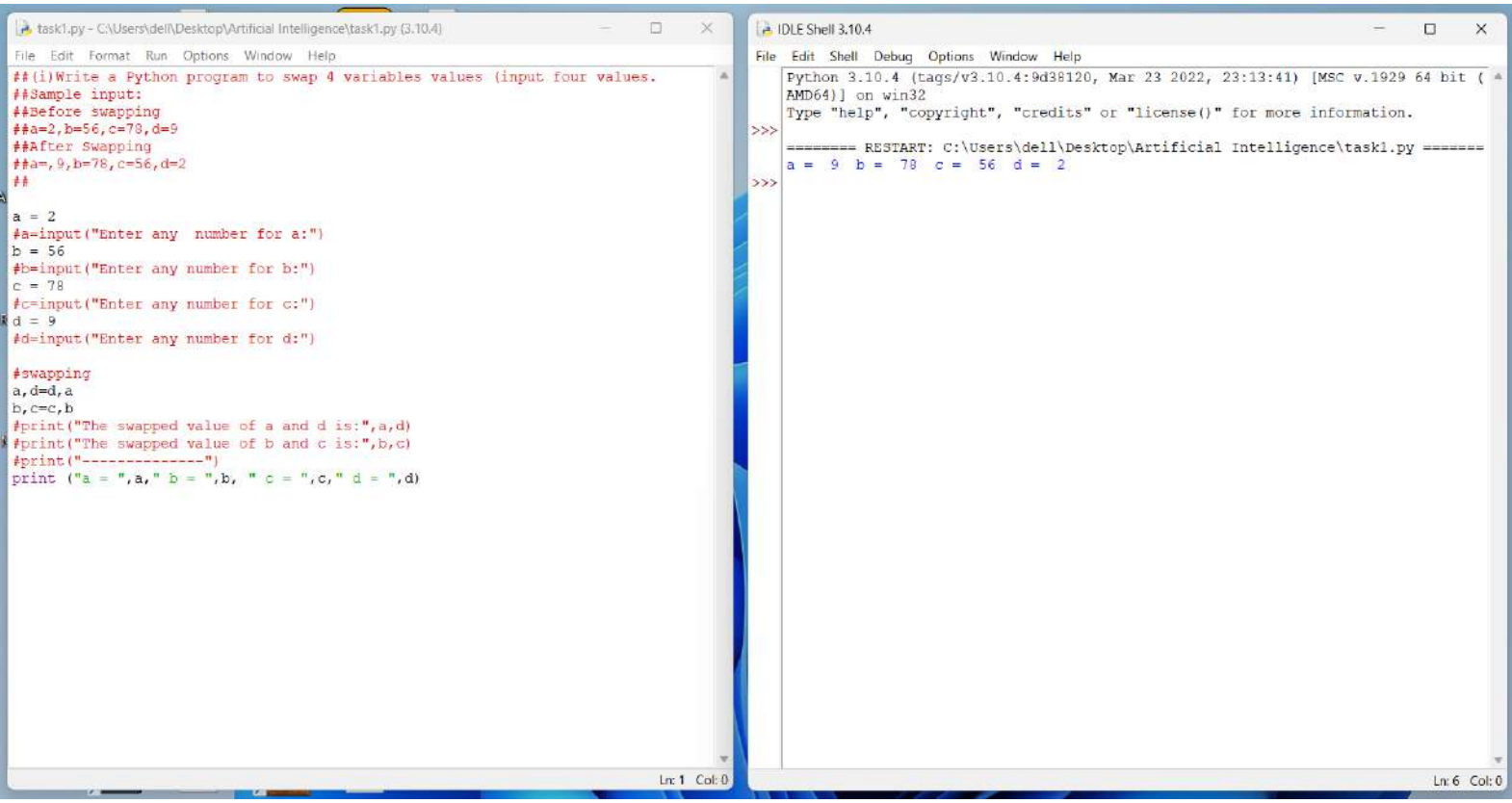
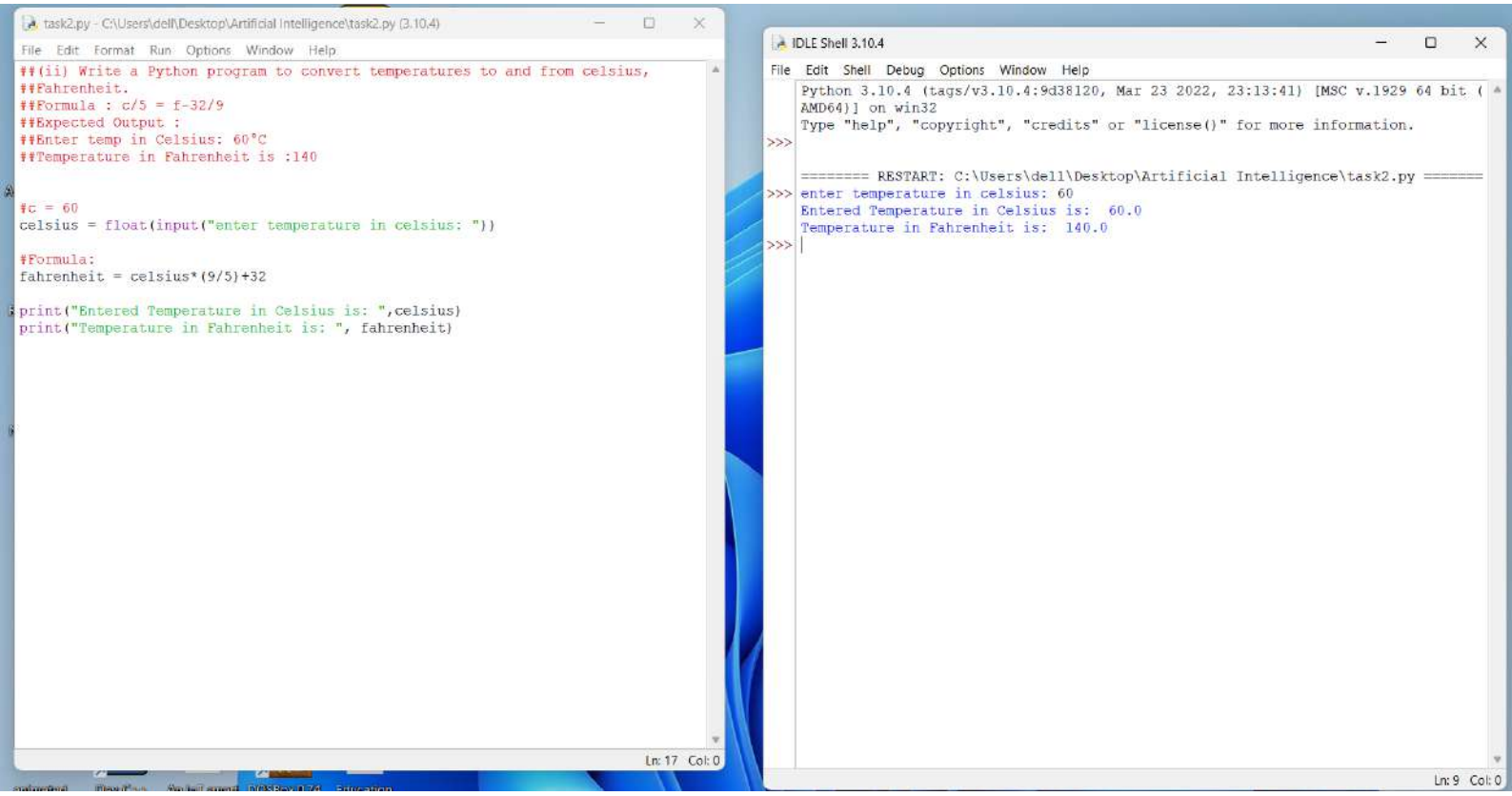

task1.py - C:\Users\dell\Desktop\Artificial Intelligence\task1.py (3.10.4)
File Edit Format Run Options Window Help
##(i)Write a Python program to swap 4 variables values (input four values.
##Sample input:
##Before swapping
##a=2,b=56,c=78,d=9
##After Swapping
##a=,9,b=78,c=56,d=2
##
a = 2
#a=input("Enter any number for a:")
b = 56
#b=input("Enter any number for b:")
c = 78
#c=input("Enter any number for c:")
d = 9
#d=input("Enter any number for d:")
#swapping
a,d=d,a
b,c=c,b
#print("The swapped value of a and d is:",a,d)
#print("The swapped value of b and c is:",b,c)
#print("--------------")
print ("a = ",a," b = ",b, " c = ",c," d = ",d)
Ln: 1 Col: 0
IDLE Shell 3.10.4
File Edit Shell Debug Options Window Help
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:\Users\dell\Desktop\Artificial Intelligence\task1.py =======
a = 9 b = 78 c = 56 d = 2
>>>
Ln: 6 Col: 0


task2.py - C:\Users\dell\Desktop\Artificial Intelligence\task2.py (3.10.4)
File Edit Format Run Options Window Help
##(ii) Write a Python program to convert temperatures to and from celsius,
##Fahrenheit.
##Formula : c/5 = f-32/9
##Expected Output :
##Enter temp in Celsius: 60°C
##Temperature in Fahrenheit is :140
#c = 60
celsius = float(input("enter temperature in celsius: "))
#Formula:
fahrenheit = celsius*(9/5)+32
print("Entered Temperature in Celsius is: ",celsius)
print("Temperature in Fahrenheit is: ", fahrenheit)
Ln: 17 Col: 0
IDLE Shell 3.10.4
File Edit Shell Debug Options Window Help
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:\Users\dell\Desktop\Artificial Intelligence\task2.py ========
>>> enter temperature in celsius: 60
Entered Temperature in Celsius is: 60.0
Temperature in Fahrenheit is: 140.0
>>>
Ln: 9 Col: 0

task3.py - C:\Users\dell\Desktop\Artificial Intelligence\task3.py (3.10.4)

File Edit Format Run Options Window Help

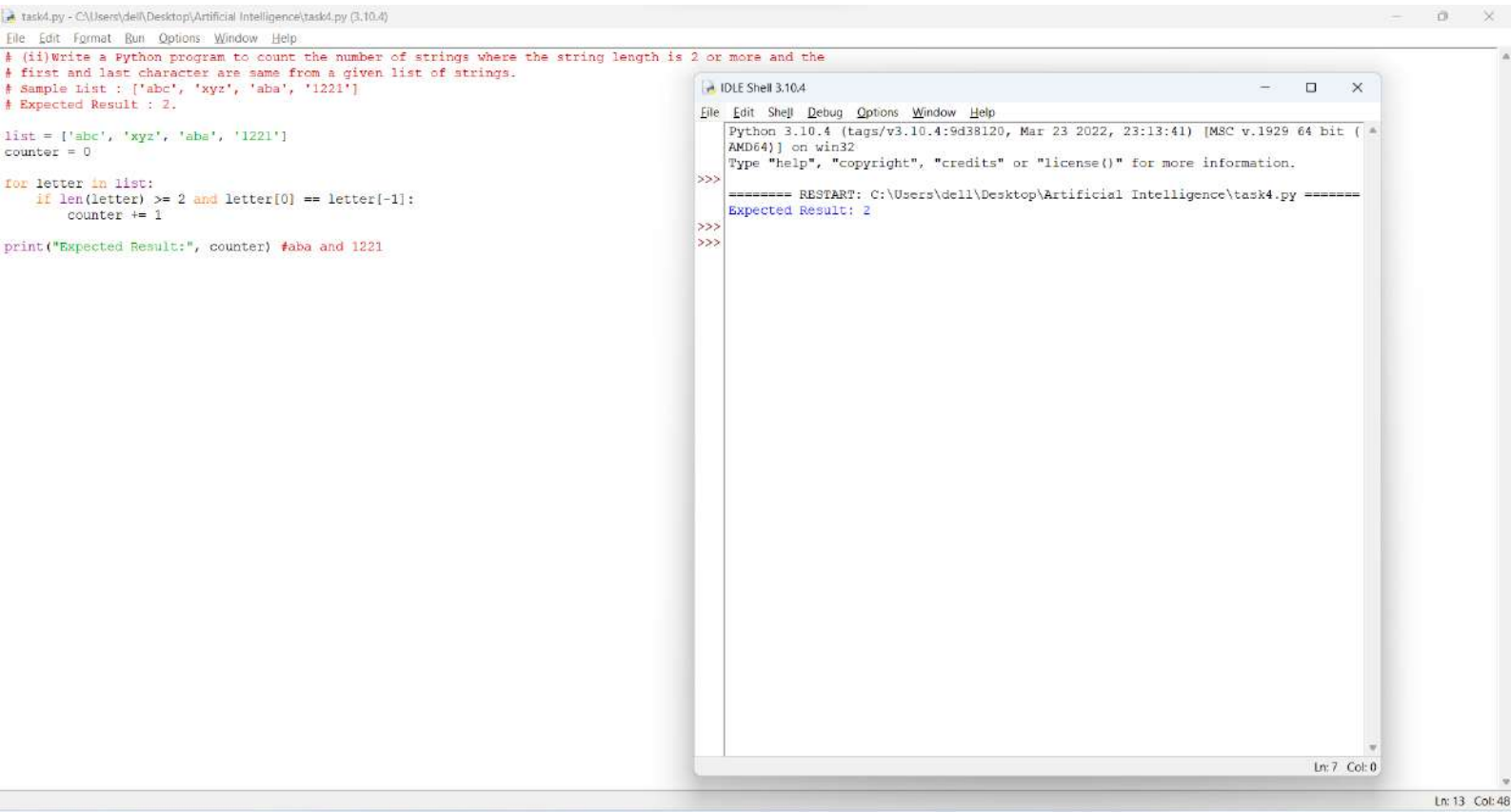
```
# Append
fruit = ['Mango','Apple','Orange','Pineapple'];
print (fruit);
fruit.append('Guava');
print (fruit);
veg = ['Potato','Onion','Tomato'];
fruit.append(veg)
print(fruit) #append use krne se nested list print horhi
print("------------------------------")
#Extend :  ye break krdeta h value ko string hoga to letters me break list h to elements me break
fruits = ['Mango','Apple','Orange','Pineapple']
print(fruits)
fruits.extend('Guava');
print (fruits);
veg1 = ['Potato','Onion','Tomato'] # extend elements me break krta h to nested list nh banegi
fruits.extend(veg)
print (fruits)

print("------------------------------")
# Insert

list = ['Dell',"Hewlett Packard",'lenovo']
# .insert(index,element)
print(list)
list.insert(0,'apple')
print(list)


print("------------------------------")
#Remove
# .remove(element)
abc = [1, 2 ,3 ,4 ,5]
abc.remove(3)
print(abc)
# abc.remove(31) #give value error if element is not in the list
# print(abc)


print("------------------------------")
# Reverse
newList = [1,2,3,4,5]
print(newList)
newList.reverse()
print(newList)
```

IDLE Shell 3.10.4

File Edit Shell Debug Options Window Help

```
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:\Users\dell\Desktop\Artificial Intelligence\task3.py =======
['Mango', 'Apple', 'Orange', 'Pineapple']
['Mango', 'Apple', 'Orange', 'Pineapple', 'Guava']
['Mango', 'Apple', 'Orange', 'Pineapple', 'Guava', ['Potato', 'Onion', 'Tomato']
]
------------------------------
['Mango', 'Apple', 'Orange', 'Pineapple']
['Mango', 'Apple', 'Orange', 'Pineapple', 'G', 'u', 'a', 'v', 'a']
['Mango', 'Apple', 'Orange', 'Pineapple', 'G', 'u', 'a', 'v', 'a', 'Potato', 'On
ion', 'Tomato']
------------------------------
['Dell', 'Hewlett Packard', 'lenovo']
['apple', 'Dell', 'Hewlett Packard', 'lenovo']
------------------------------
[1, 2, 4, 5]
------------------------------
[1, 2, 3, 4, 5]
[5, 4, 3, 2, 1]
>>>
```

Ln: 20 Col: 0


task4.py - C:\Users\dell\Desktop\Artificial Intelligence\task4.py (3.10.4)
File Edit Format Run Options Window Help
# (ii)Write a Python program to count the number of strings where the string length is 2 or more and the
# first and last character are same from a given list of strings.
# Sample List : ['abc', 'xyz', 'aba', '1221']
# Expected Result : 2.
list = ['abc', 'xyz', 'aba', '1221']
counter = 0
for letter in list:
if len(letter) >= 2 and letter[0] == letter[-1]:
counter += 1
print("Expected Result:", counter) #aba and 1221
IDLE Shell 3.10.4
File Edit Shell Debug Options Window Help
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:\Users\dell\Desktop\Artificial Intelligence\task4.py =======
Expected Result: 2
>>>
>>>
Ln: 7 Col: 0
Ln: 13 Col: 48

task5.py - C:\Users\dell\Desktop\Artificial Intelligence\task5.py (3.10.4)

File Edit Format Run Options Window Help

```
dict1 = {
    "Pakistan" : "Islamabad",
    "India" : "new Delhi",
    "Bangadesh" : "Dhaka",

}
dict2 = {
    "Canada" : "Toronto",
    "Japan" : "Tokyo"
}

dict1.update(dict2)
# dict1.extend(dict2)
print(dict1)

#operator method
dic = {**dict1,**dict2}
print(dic)

dic1 = dict1 | dict2
print(dic1)
```

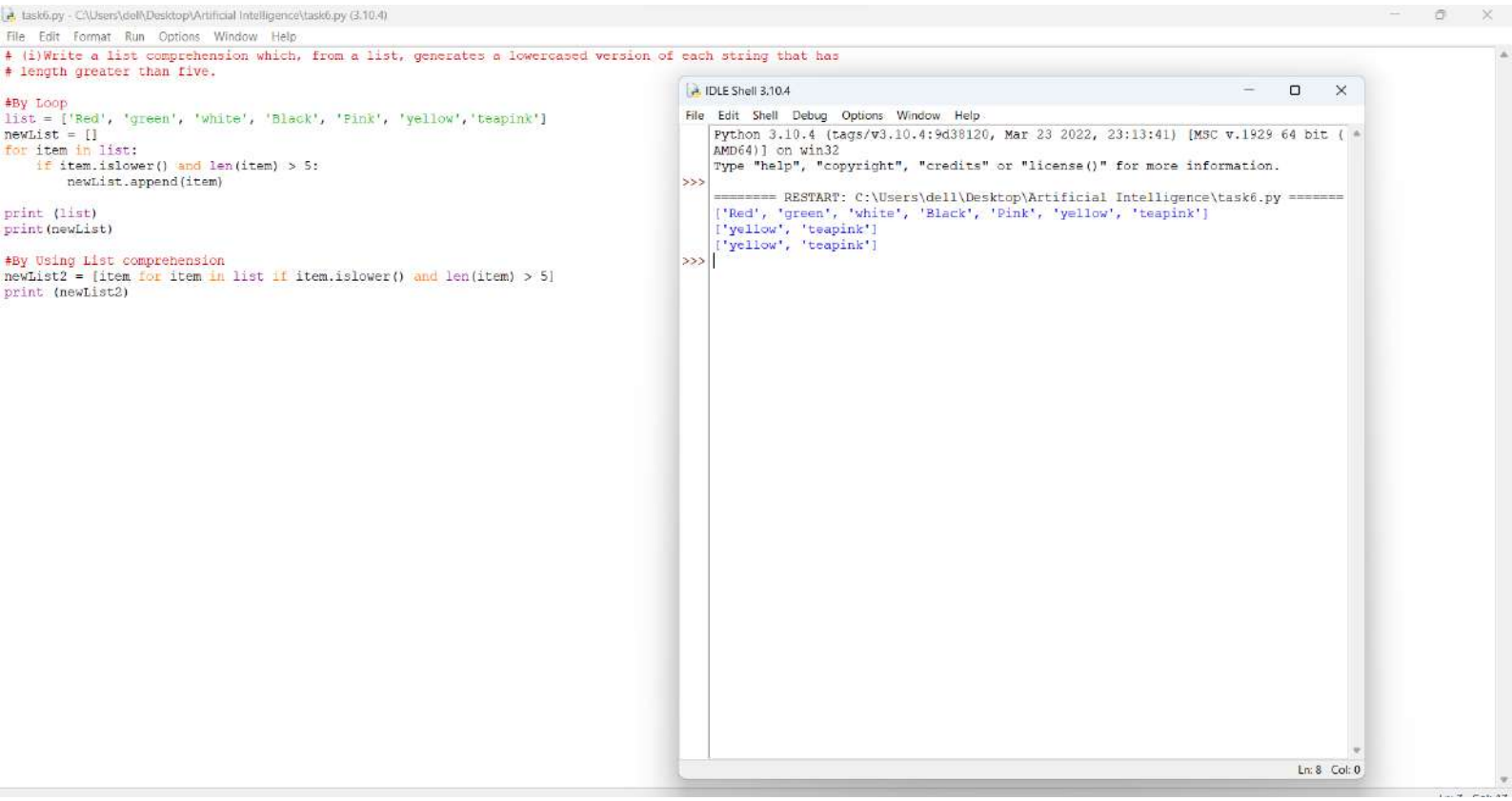
IDLE Shell 3.10.4

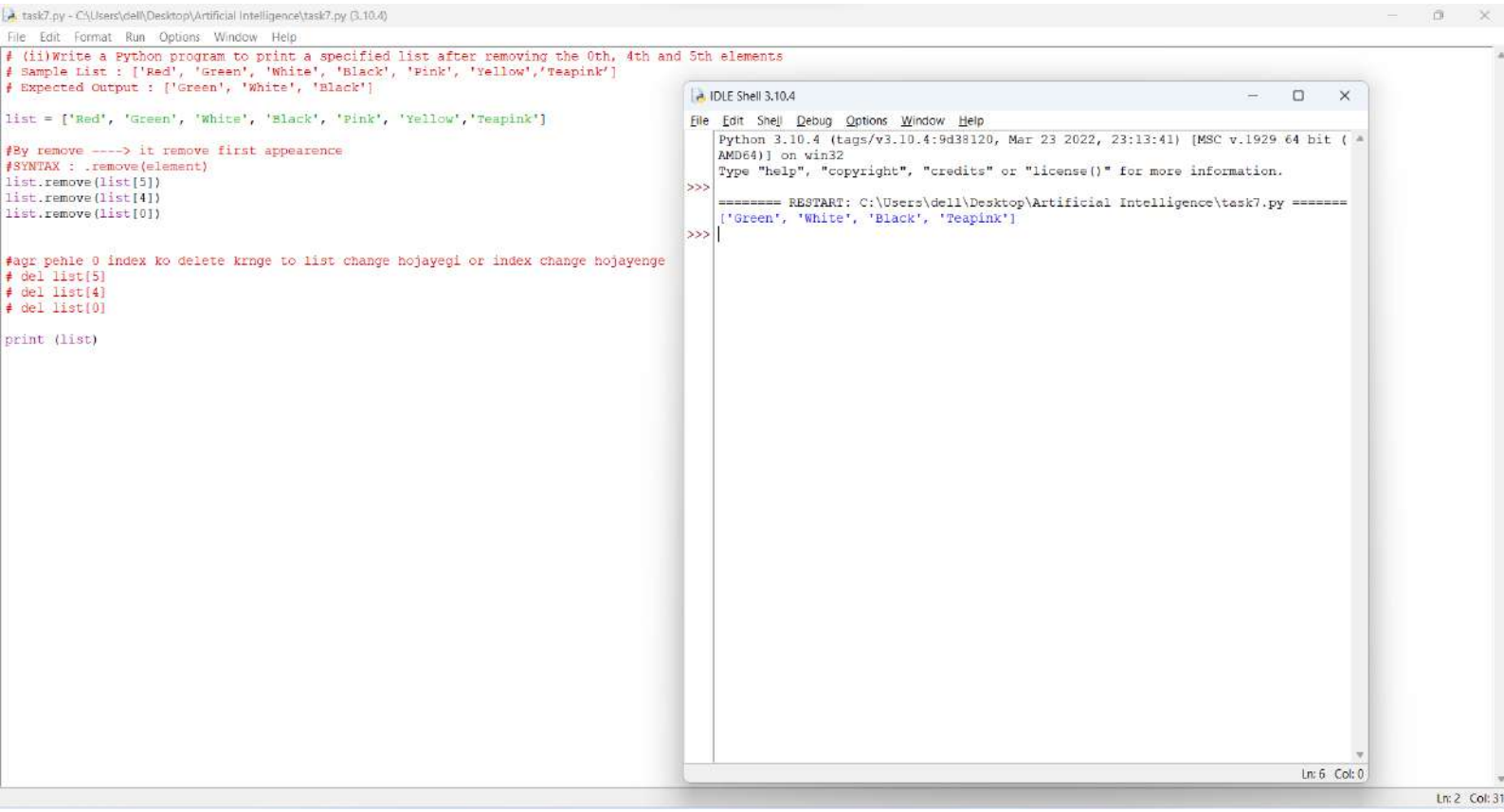
File Edit Shell Debug Options Window Help

```
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
======= RESTART: C:\Users\dell\Desktop\Artificial Intelligence\task5.py =======
{'Pakistan': 'Islamabad', 'India': 'new Delhi', 'Bangadesh': 'Dhaka', 'Canada':
'Toronto', 'Japan': 'Tokyo'}
{'Pakistan': 'Islamabad', 'India': 'new Delhi', 'Bangadesh': 'Dhaka', 'Canada':
'Toronto', 'Japan': 'Tokyo'}
{'Pakistan': 'Islamabad', 'India': 'new Delhi', 'Bangadesh': 'Dhaka', 'Canada':
'Toronto', 'Japan': 'Tokyo'}
>>>
```

Ln: 8 Col: 0

Ln: 1 Col: 0


task6.py - C:\Users\dell\Desktop\Artificial Intelligence\task6.py (3.10.4)
File Edit Format Run Options Window Help
(i)Write a list comprehension which, from a list, generates a lowercased version of each string that has
length greater than five.
#By Loop
list = ['Red', 'green', 'white', 'Black', 'Pink', 'yellow','teapink']
newList = []
for item in list:
if item.islower() and len(item) > 5:
newList.append(item)
print (list)
print(newList)
#By Using List comprehension
newList2 = [item for item in list if item.islower() and len(item) > 5]
print (newList2)
IDLE Shell 3.10.4
File Edit Shell Debug Options Window Help
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
======= RESTART: C:\Users\dell\Desktop\Artificial Intelligence\task6.py =======
['Red', 'green', 'white', 'Black', 'Pink', 'yellow', 'teapink']
['yellow', 'teapink']
['yellow', 'teapink']
>>>
Ln: 8 Col: 0


task7.py - C:\Users\dell\Desktop\Artificial Intelligence\task7.py (3.10.4)
File Edit Format Run Options Window Help
# (ii)Write a Python program to print a specified list after removing the 0th, 4th and 5th elements
# Sample List : ['Red', 'Green', 'White', 'Black', 'Pink', 'Yellow','Teapink']
# Expected Output : ['Green', 'White', 'Black']
list = ['Red', 'Green', 'White', 'Black', 'Pink', 'Yellow','Teapink']
#By remove ----> it remove first appearence
#SYNTAX : .remove(element)
list.remove(list[5])
list.remove(list[4])
list.remove(list[0])
#agr pehle 0 index ko delete krnge to list change hojayegi or index change hojayenge
del list[5]
del list[4]
del list[0]
print (list)
IDLE Shell 3.10.4
File Edit Shell Debug Options Window Help
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:\Users\dell\Desktop\Artificial Intelligence\task7.py =======
['Green', 'White', 'Black', 'Teapink']
>>>
Ln: 6 Col: 0
Ln: 2 Col: 31

operator1.py - C:\Users\dell\Desktop\Artificial Intelligence\operator1.py (3.10.4)

File Edit Format Run Options Window Help

```
#Identity Operators in Python
x = 6
if (type(x) is int):
    print ("true")
else:
    print ("false")
```

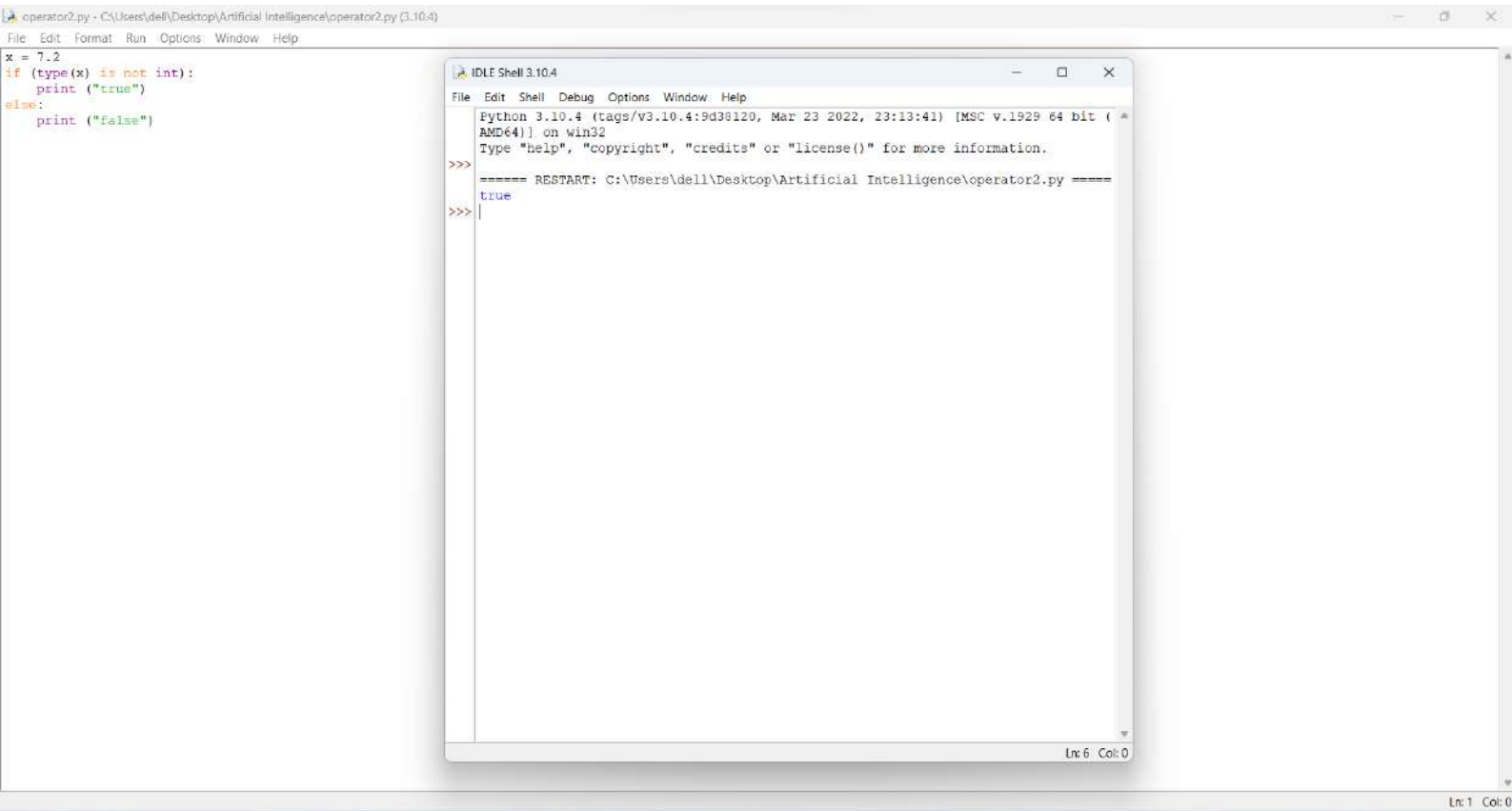
IDLE Shell 3.10.4

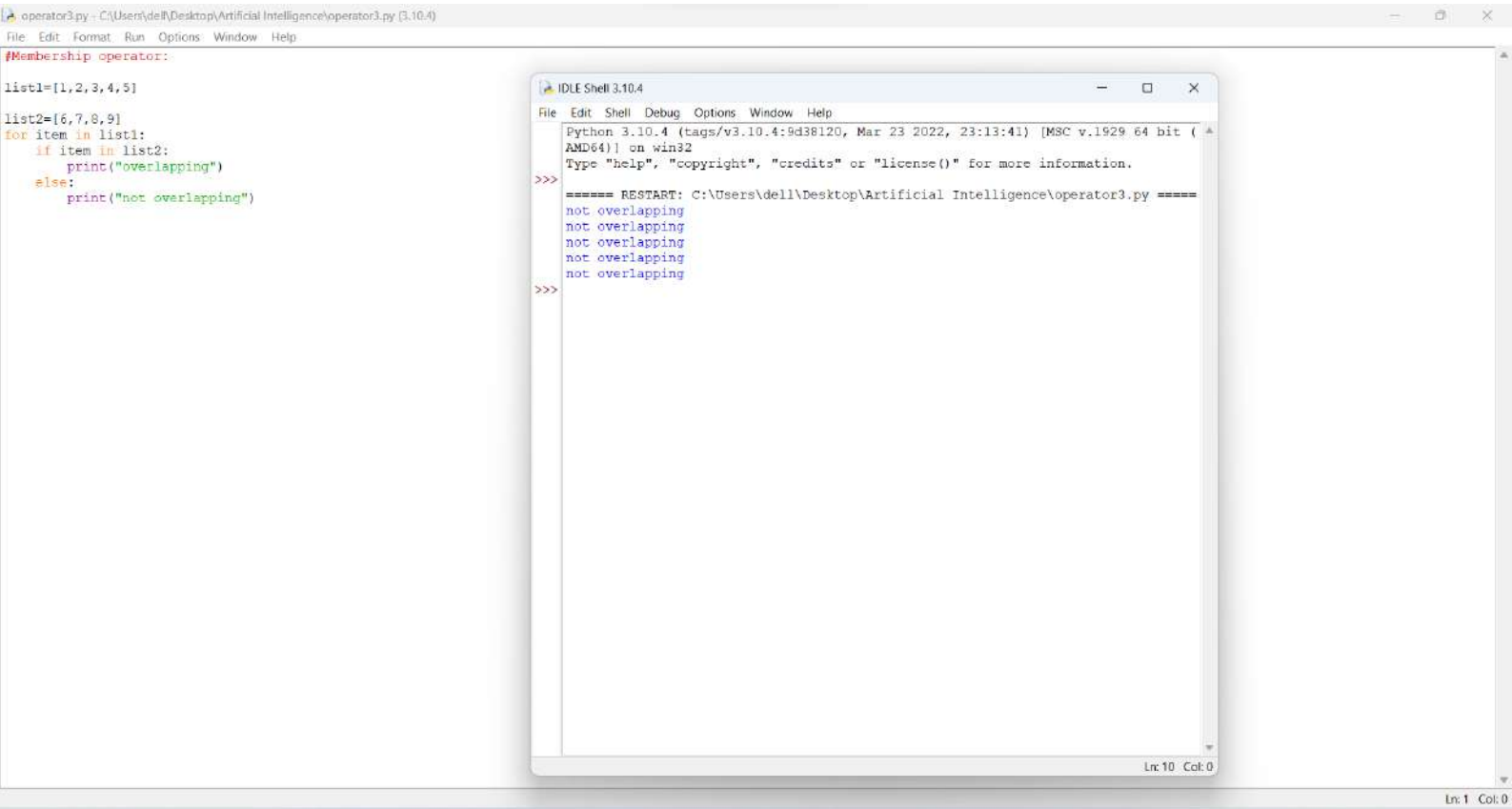
File Edit Shell Debug Options Window Help

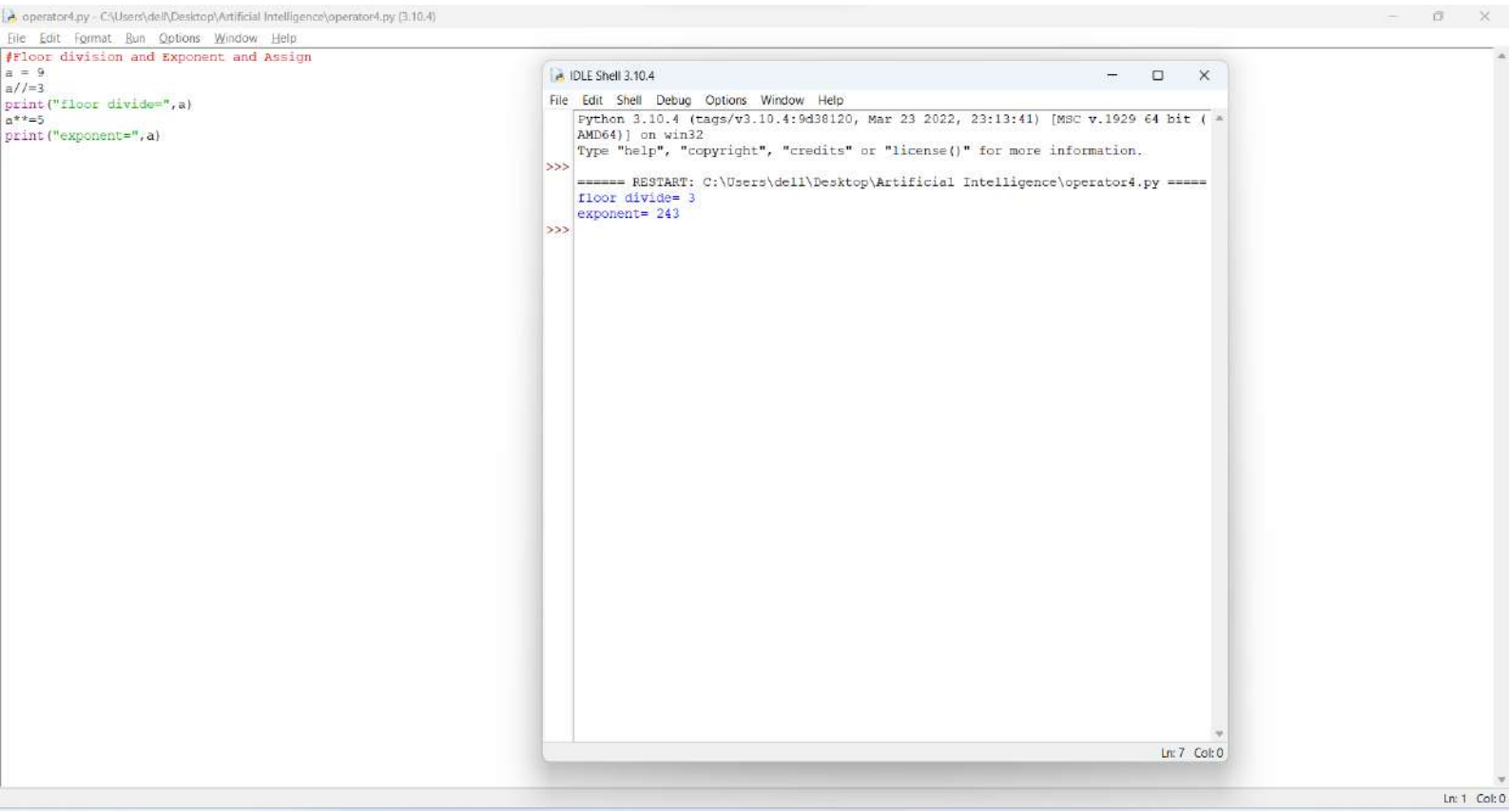
```
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
====== RESTART: C:\Users\dell\Desktop\Artificial Intelligence\operator1.py =====
true
>>>
```

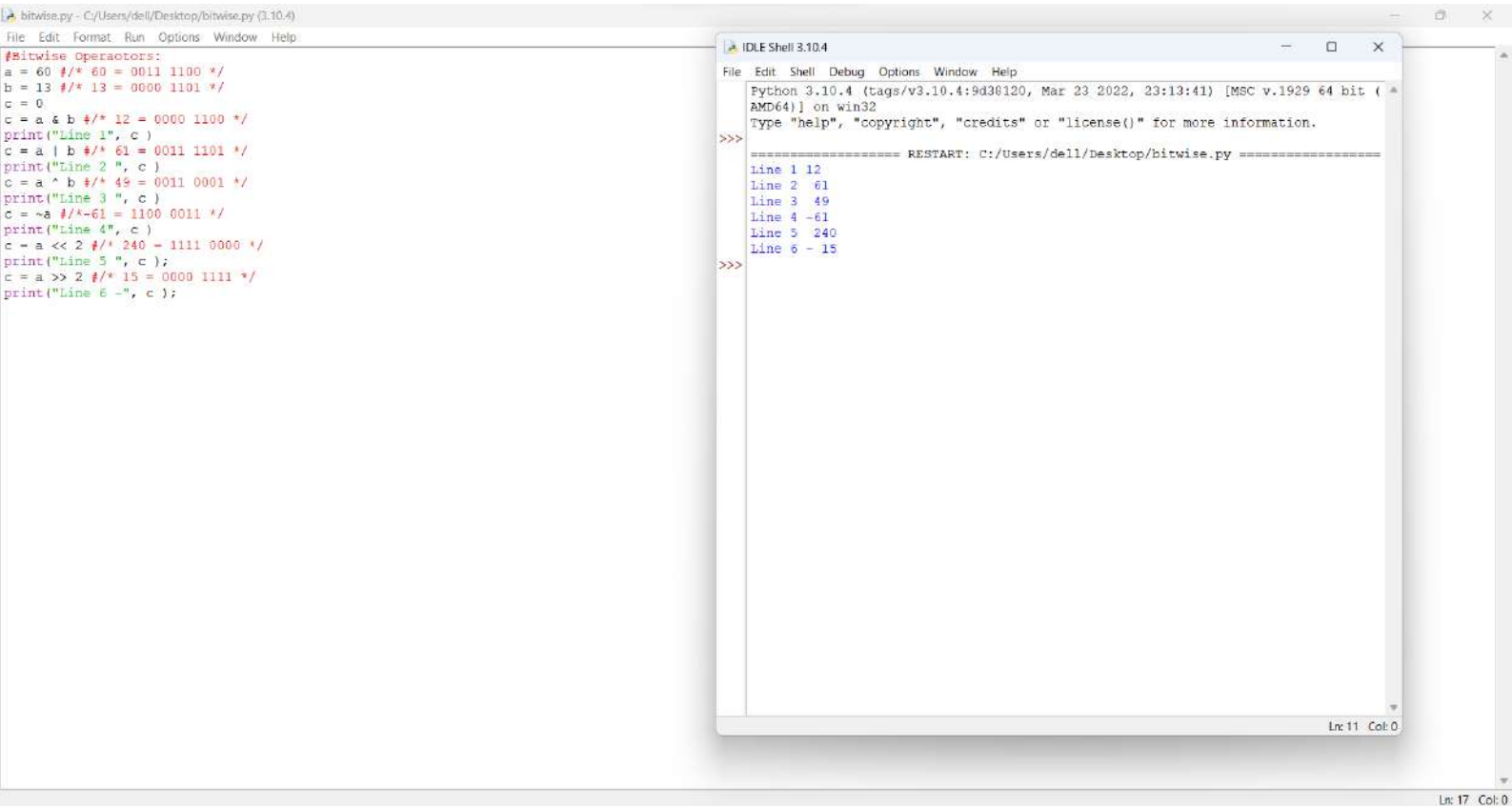
Ln: 6 Col: 0

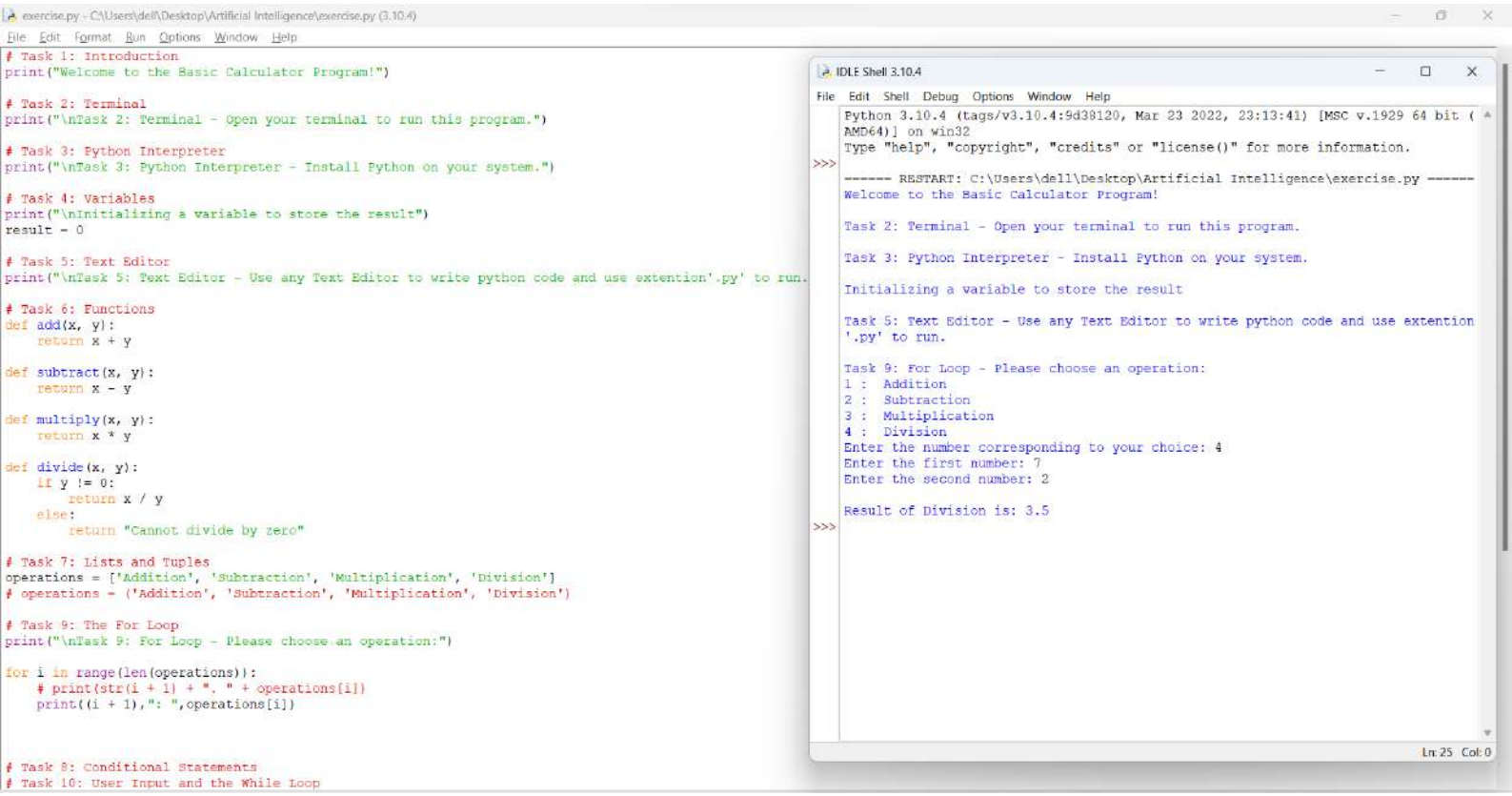
Ln: 1 Col: 0

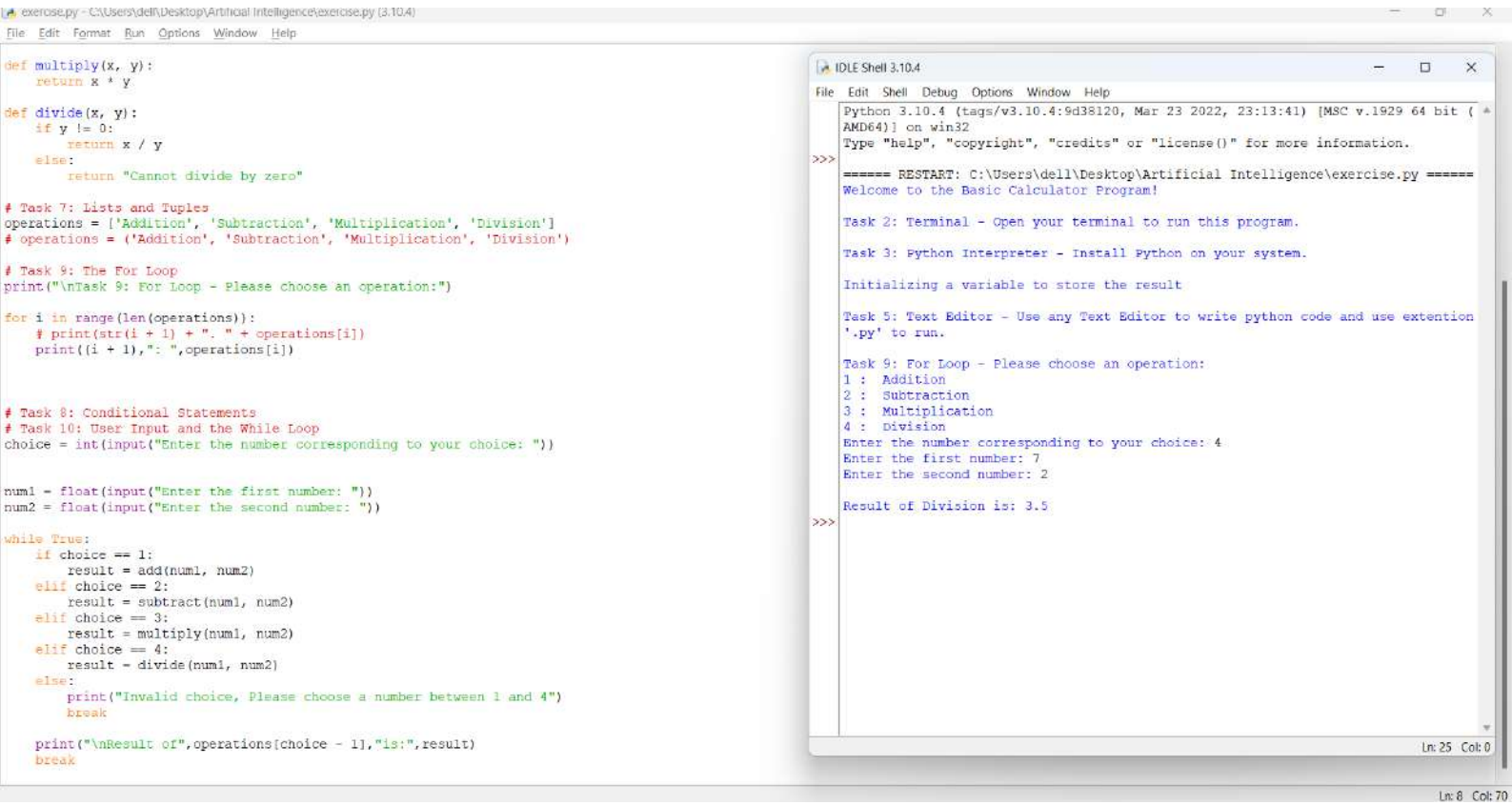

operator2.py - C:\Users\dell\Desktop\Artificial Intelligence\operator2.py (3.10.4)
File Edit Format Run Options Window Help
x = 7.2
if (type(x) is not int):
print ("true")
else:
print ("false")
IDLE Shell 3.10.4
File Edit Shell Debug Options Window Help
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
====== RESTART: C:\Users\dell\Desktop\Artificial Intelligence\operator2.py =====
true
>>>
Ln: 6 Col: 0
Ln: 1 Col: 0


operator3.py - C:\Users\dell\Desktop\Artificial Intelligence\operator3.py (3.10.4)
File Edit Format Run Options Window Help
#Membership operator:
list1=[1,2,3,4,5]
list2=[6,7,8,9]
for item in list1:
if item in list2:
print("overlapping")
else:
print("not overlapping")
IDLE Shell 3.10.4
File Edit Shell Debug Options Window Help
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
====== RESTART: C:\Users\dell\Desktop\Artificial Intelligence\operator3.py =====
not overlapping
not overlapping
not overlapping
not overlapping
not overlapping
>>>
Ln: 10 Col: 0
Ln: 1 Col: 0


operator4.py - C:\Users\dell\Desktop\Artificial Intelligence\operator4.py (3.10.4)
File Edit Format Run Options Window Help
#Floor division and Exponent and Assign
a = 9
a//=3
print("floor divide=",a)
a**=5
print("exponent=",a)
IDLE Shell 3.10.4
File Edit Shell Debug Options Window Help
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
====== RESTART: C:\Users\dell\Desktop\Artificial Intelligence\operator4.py =====
floor divide= 3
exponent= 243
>>>
Ln: 7 Col: 0
Ln: 1 Col: 0


bitwise.py - C:/Users/dell/Desktop/bitwise.py (3.10.4)
File Edit Format Run Options Window Help
#Bitwise Operaotors:
a = 60 #/* 60 = 0011 1100 */
b = 13 #/* 13 = 0000 1101 */
c = 0
c = a & b #/* 12 = 0000 1100 */
print("Line 1", c)
c = a | b #/* 61 = 0011 1101 */
print("Line 2 ", c)
c = a ^ b #/* 49 = 0011 0001 */
print("Line 3 ", c)
c = ~a #/*-61 = 1100 0011 */
print("Line 4", c)
c = a << 2 #/* 240 = 1111 0000 */
print("Line 5 ", c);
c = a >> 2 #/* 15 = 0000 1111 */
print("Line 6 -", c);
Ln: 17 Col: 0
IDLE Shell 3.10.4
File Edit Shell Debug Options Window Help
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Users/dell/Desktop/bitwise.py ==========
Line 1 12
Line 2 61
Line 3 49
Line 4 -61
Line 5 240
Line 6 - 15
>>>
Ln: 11 Col: 0


exercise.py - C:\Users\dell\Desktop\Artificial Intelligence\exercise.py (3.10.4)
File Edit Format Run Options Window Help
# Task 1: Introduction
print("Welcome to the Basic Calculator Program!")
# Task 2: Terminal
print("\nTask 2: Terminal - Open your terminal to run this program.")
# Task 3: Python Interpreter
print("\nTask 3: Python Interpreter - Install Python on your system.")
# Task 4: Variables
print("\nInitializing a variable to store the result")
result = 0
# Task 5: Text Editor
print("\nTask 5: Text Editor - Use any Text Editor to write python code and use extention'.py' to run.
# Task 6: Functions
def add(x, y):
return x + y
def subtract(x, y):
return x - y
def multiply(x, y):
return x * y
def divide(x, y):
if y != 0:
return x / y
else:
return "Cannot divide by zero"
# Task 7: Lists and Tuples
operations = ['Addition', 'Subtraction', 'Multiplication', 'Division']
# operations = ('Addition', 'Subtraction', 'Multiplication', 'Division')
# Task 9: The For Loop
print("\nTask 9: For Loop - Please choose an operation:")
for i in range(len(operations)):
# print(str(i + 1) + ". " + operations[i])
print((i + 1),": ",operations[i])
# Task 8: Conditional Statements
# Task 10: User Input and the While Loop
IDLE Shell 3.10.4
File Edit Shell Debug Options Window Help
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
====== RESTART: C:\Users\dell\Desktop\Artificial Intelligence\exercise.py ======
Welcome to the Basic Calculator Program!
Task 2: Terminal - Open your terminal to run this program.
Task 3: Python Interpreter - Install Python on your system.
Initializing a variable to store the result
Task 5: Text Editor - Use any Text Editor to write python code and use extention
'.py' to run.
Task 9: For Loop - Please choose an operation:
1 : Addition
2 : Subtraction
3 : Multiplication
4 : Division
Enter the number corresponding to your choice: 4
Enter the first number: 7
Enter the second number: 2
Result of Division is: 3.5
>>>
Ln: 25 Col: 0


exercise.py - C:\Users\dell\Desktop\Artificial Intelligence\exercise.py (3.10.4)
File Edit Format Run Options Window Help
def multiply(x, y):
return x * y
def divide(x, y):
if y != 0:
return x / y
else:
return "Cannot divide by zero"
# Task 7: Lists and Tuples
operations = ['Addition', 'Subtraction', 'Multiplication', 'Division']
# operations = ('Addition', 'Subtraction', 'Multiplication', 'Division')
# Task 9: The For Loop
print("\nTask 9: For Loop - Please choose an operation:")
for i in range(len(operations)):
# print(str(i + 1) + ". " + operations[i])
print((i + 1),": ",operations[i])
# Task 8: Conditional Statements
# Task 10: User Input and the While Loop
choice = int(input("Enter the number corresponding to your choice: "))
num1 = float(input("Enter the first number: "))
num2 = float(input("Enter the second number: "))
while True:
if choice == 1:
result = add(num1, num2)
elif choice == 2:
result = subtract(num1, num2)
elif choice == 3:
result = multiply(num1, num2)
elif choice == 4:
result = divide(num1, num2)
else:
print("Invalid choice, Please choose a number between 1 and 4")
break
print("\nResult of",operations[choice - 1],"is:",result)
break
IDLE Shell 3.10.4
File Edit Shell Debug Options Window Help
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
====== RESTART: C:\Users\dell\Desktop\Artificial Intelligence\exercise.py ======
Welcome to the Basic Calculator Program!
Task 2: Terminal - Open your terminal to run this program.
Task 3: Python Interpreter - Install Python on your system.
Initializing a variable to store the result
Task 5: Text Editor - Use any Text Editor to write python code and use extention
'.py' to run.
Task 9: For Loop - Please choose an operation:
1 : Addition
2 : Subtraction
3 : Multiplication
4 : Division
Enter the number corresponding to your choice: 4
Enter the first number: 7
Enter the second number: 2
Result of Division is: 3.5
>>>
Ln: 25 Col: 0
Ln: 8 Col: 70