1. Arithmetic operators

num = 5

print(num) # Output: 5

num = num + 2

print(num) # Output: 7

num = num // 3 \* 6

print(num) # Output: 6

print(7 + 15 % 4) # Output: 8

num = 24 // 3 // 4

print(num) # Output: 2

1. Printing strings

**i)**

a = "Hello out there."

print(a)

b = 'Hello again.'

print(b)

# Concatenating variables a and b

print(a + " " + b) # Output: Hello out there. Hello again.

**ii)**

# This produces an error because you cannot directly concatenate an integer and a string.

total = 10

greet = 'Hello'

# Fix using the str() function to convert the integer to a string

both = greet + ' ' + str(total)

print(both) # Output: Hello 10

**iii)**

# Output: A B C D

print("A", end=' ')

print("B", end=' ')

print("C", end=' ')

print("D", end=' ')

**iv)**

the\_text = input('Enter some text.\n') # get some text!

# print - version 1

print('This is what you entered: ')

print(the\_text)

# print – version 2

print('This is what you entered:', the\_text)

# print - version 3 - Suppress printing of a new line, use end=' '

print('This is what you entered:', end=' ')

print(the\_text)

**Lecture questions.**

2.

num\_1 = int(input('Enter number one: '))

num\_2 = int(input('Enter number two: '))

total = num\_1 + num\_2

print(total)

3.

cost\_of\_item = float(input('Enter cost of item: '))

cash\_paid = float(input('Enter cash paid: '))

change = cash\_paid - cost\_of\_item

print('Change is:', change)

4.

num\_1 = float(input('Enter number one: '))

num\_2 = float(input('Enter number two: '))

num\_3 = float(input('Enter number three: '))

average = (num\_1 + num\_2 + num\_3) / 3

print('Average is:', round(average, 2)) # Rounds to 2 decimal places

**debugging errors**

5.

Debugging Shopping Program

# Corrected shopping program

a = 3 # number of apples

o = 0 # number of oranges

print('you have:', a, 'apples and', o, 'oranges') # Corrected typo in printing statement

buy\_a = 4 # apples you buy

buy\_o = 6 # oranges you buy

print('you buy:', buy\_a, 'apples and', buy\_o, 'oranges') # Corrected typo in printing statement

a = a + buy\_a # Corrected variable name from buy\_A to buy\_a

o = o + buy\_o

print('you now have:', a, 'apples and', o, 'oranges') # Corrected typo in printing statement

**additional exercises**

6.

Temperature program

# Convert Centigrade to Fahrenheit

centigrade = float(input('Enter temperature in Centigrade: '))

fahrenheit = (centigrade \* 1.8) + 32

print('Temperature in Fahrenheit:', fahrenheit)

h.

volume of a box

# Calculate volume of a box

length = float(input('Enter length of the box: '))

height = float(input('Enter height of the box: '))

width = float(input('Enter width of the box: '))

volume = length \* height \* width

print('Volume of the box:', volume)

**exception handling**

a)

try:

n = int(input("Please enter an integer: "))

print(n)

except ValueError:

print("Requires a valid integer!")

b)

try:

x = 45 / 0

except ZeroDivisionError:

print("Cannot divide by zero")