ASSIGNMENT 4

#exercise 1  
def custom\_function(arg1, arg2=10, arg3=None):  
 if arg3 is None:  
 print(f"The sum is: {arg1 + arg2}")  
 else:  
 print(f"The product is: {arg1 \* arg2 \* arg3}")  
  
custom\_function(10)  
custom\_function(5, 3)  
custom\_function(5, 3, 2)  
  
#exercise 2  
  
def filter\_strings(strings):  
 return [s for s in strings if len(s) >= 5]  
  
  
strings = ["honey", "cat", "cherry", "dog", "elephant"]  
filtered = filter\_strings(strings)  
print(filtered)  
  
#exercise 3  
expression = "3 \* 5 + 2"  
result = eval(expression)  
print(f"The result of the expression '{expression}' is: {result}")  
  
#exercise 4  
def is\_prime(n):  
 if n < 2:  
 return False  
 for i in range(2, int(n\*\*0.5) + 1):  
 if n % i == 0:  
 return False  
 return True  
  
numbers = [2, 3, 4, 5, 6, 7, 8, 9, 10, 11]  
prime\_numbers = list(filter(is\_prime, numbers))  
print(prime\_numbers)  
  
#exercise 5  
def to\_uppercase(strings):  
 return list(map(str.upper, strings))  
  
  
strings = ["apple", "banana", "cherry"]  
uppercase\_strings = to\_uppercase(strings)  
print(uppercase\_strings)

