Assignment 6: Custom packages and Lists

Task 1: You are asked to create and use a custom Python package.

1. Create a Python package named **Custom_Package**.
   Inside this package, create a module file called **my_functions.py** that contains the following **four functions**:
   1. add_numbers(a, b)
      - Receives two numbers a and b.
      - Returns the sum of the two numbers.
   2. factorial(n)
      - Receives an integer n.
      - Returns the factorial of n (e.g. factorial(5) = 120).
      - Assume n is a non-negative integer.
   3. is_even(n)
      - Receives an integer n.
      - Returns True if n is an even number, otherwise returns False.
   4. average(a, b, c)
      - Receives **three numbers** a, b, and c.
      - Returns the arithmetic mean (average) of these three numbers.
2. In the same project, create another Python file named **main.py** (outside the Custom_Package folder).

In main.py you must:

- Import the four functions from **Custom_Package.my_functions**.
- Call each function with suitable test values.
- Print clear output messages showing the result of each function call.

Task 2:

Write these parts of the code and print the obtained results"

1.

```
list3=[10,20,30,40,50]

print(list3)

list3.insert(0,10000)
print(list3)

list3.insert(3, 20000)
print(list3)
```

2.

3.

```
list3.remove(10000)
print(list3)

# remove needs value
list3.remove(20000)
print(list3)
```

4.

```
for i in range(1000, 1010):
    list3.append(i)


print(list3)


list3.pop()
print(list3)


list10 = list3.copy()
print(list10)
```

5.
```python
list5 = [10, 100, 17, 50 , 90]
print(list5)

# Assending Order
list5.sort()
print(list5)

# Decsending Order
list5.sort(reverse=True)
print(list5)


print(len(list5)) # No of item
print(sum(list5))  # Sum of the list

print("Average = ", sum(list5)/ len(list5))
```

6.
```python

list7 = [10, 50 , 70]

try:

    print(list7.index(100))
except:
    print("Item is not found")
```