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Practical No: 6

**1) Write a python program to create a tuple having numbers till 20. Print half of its values in 1 line and another half in the next line.**

CODE:

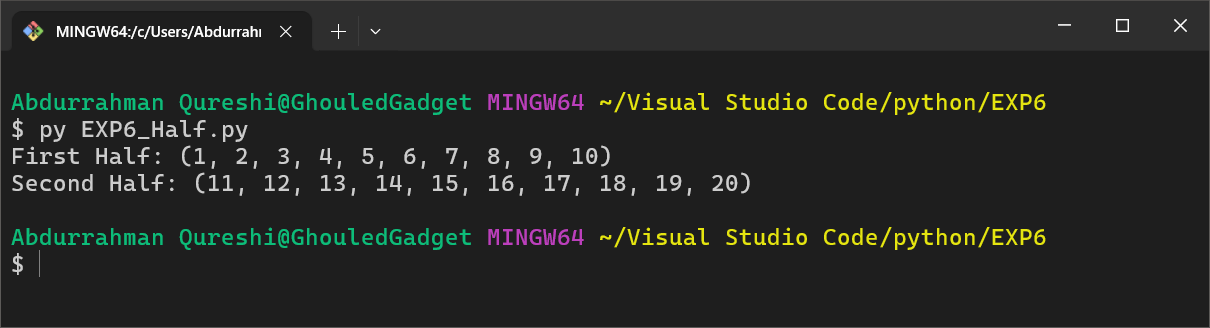
numbers = tuple(range(1, 21))

half = len(numbers) // 2

print("First Half:", numbers[:half])

print("Second Half:", numbers[half:])

OUTPUT:



**2) Write a python program to create a tuple having all numbers from 1 to 100. Now create another tuple whose values are even numbers in the first tuple.**

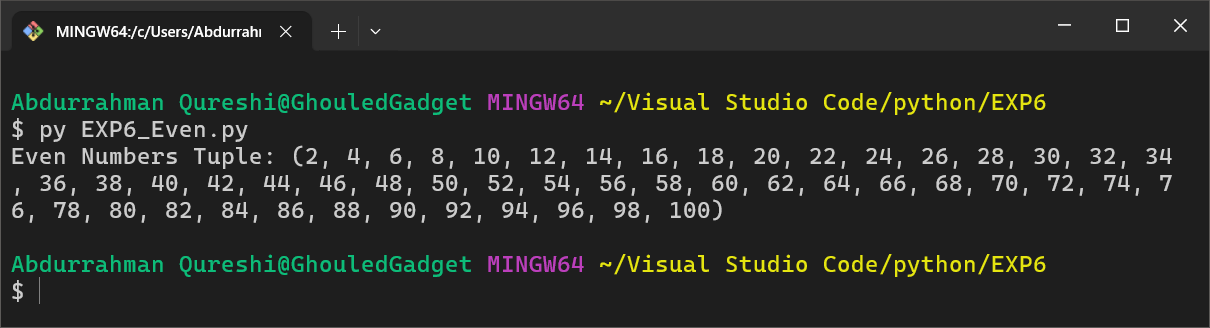
CODE:

numbers = tuple(range(1, 101))

even\_numbers = tuple(num for num in numbers if num % 2 == 0)

print("Even Numbers Tuple:", even\_numbers)

OUTPUT:



**3) Write a python program to concatenate two tuples.**

CODE:

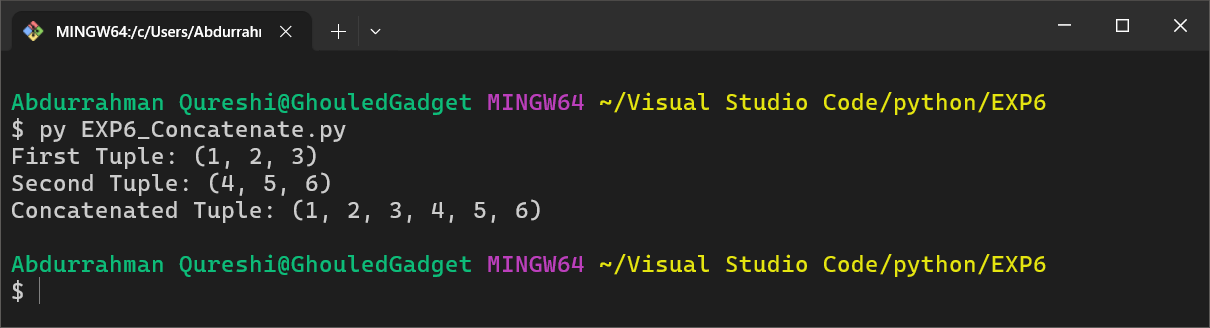
tuple1 = (1, 2, 3)

tuple2 = (4, 5, 6)

concatenated\_tuple = tuple1 + tuple2

print("Concatenated Tuple:", concatenated\_tuple)

OUTPUT:



**4) Write a python program to accept elements in the form of tuple and display their sum and average.**

CODE:

numbers = tuple(map(int, input("Enter numbers separated by space: ").split()))

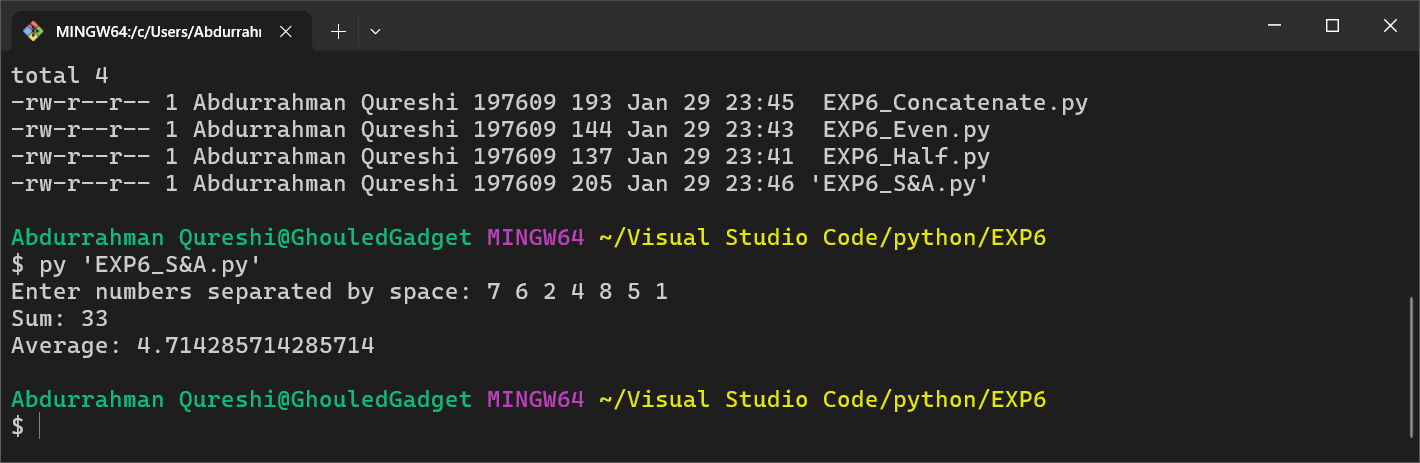
sum\_values = sum(numbers)

avg\_value = sum\_values / len(numbers)

print("Sum:", sum\_values)

print("Average:", avg\_value)

OUTPUT:



**5) Write a python program to find the first occurrence of an element in a tuple.**

CODE:

numbers = (10, 20, 30, 40, 50, 30, 60, 70)

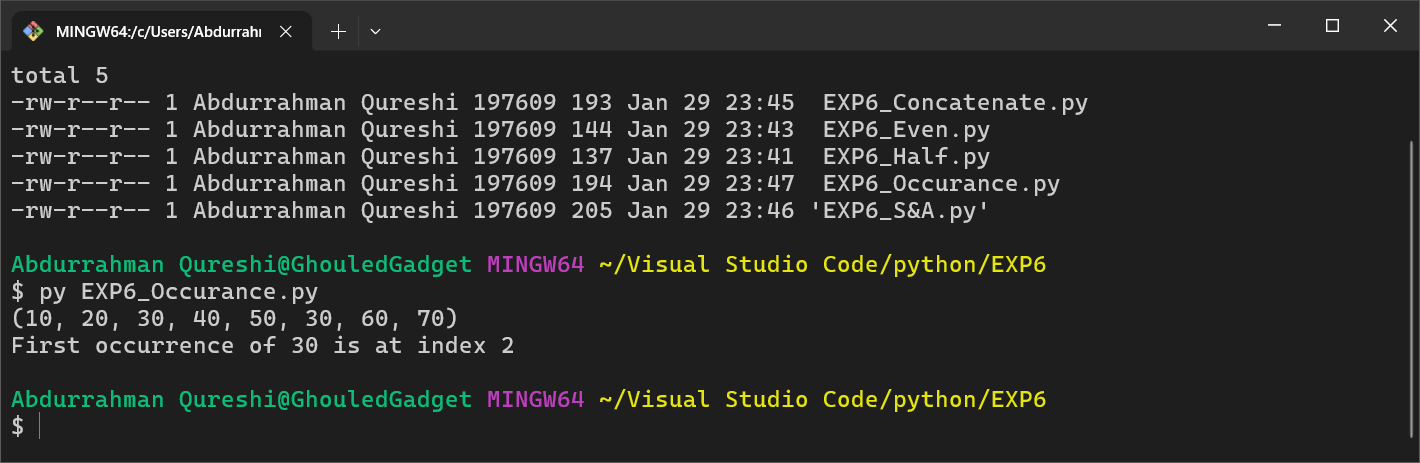
search\_element = 30

index = numbers.index(search\_element)

print(numbers)

print(f"First occurrence of {search\_element} is at index {index}")

OUTPUT:



**6) Write a python program to pickle List, dictionary, tuple and string.**

CODE:

import pickle

data = {

    "list": [1, 2, 3, 4, 5],

    "dict": {"name": "qarq90", "age": 20},

    "tuple": (10, 20, 30),

    "string": "Death is an old friend"

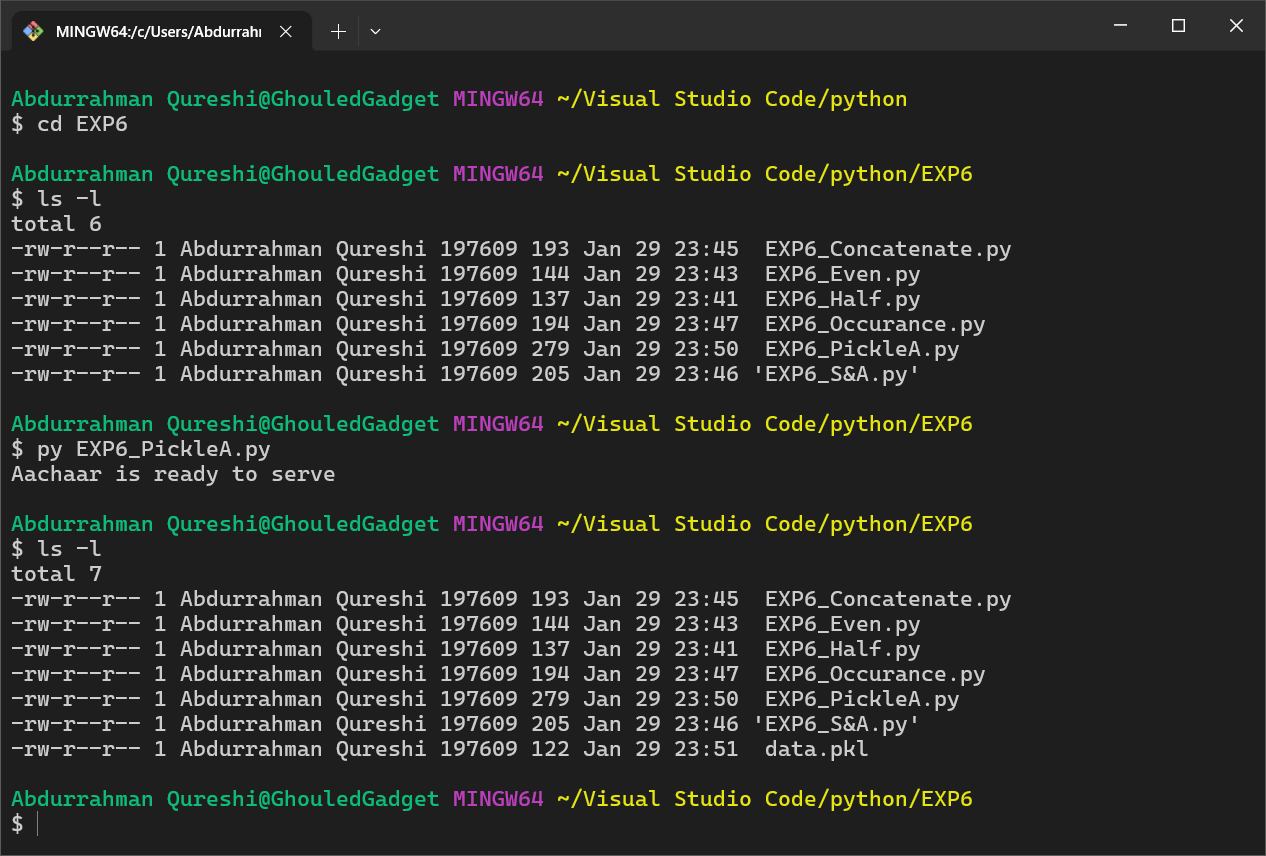
}

with open("data.pkl", "wb") as file:

    pickle.dump(data, file)

print("Aachaar is ready to serve")

OUTPUT:



**7) Write a python program to demonstrate 2 methods of the tuple.**

CODE:

numbers = (10, 20, 30, 40, 50, 30, 60, 30)

print(numbers)

print("Count of 30:", numbers.count(30))

print("Index of 40:", numbers.index(40))

OUTPUT:



**8) Write a python program to demonstrate 5 methods of set.**

CODE:

my\_set = {1, "2", 3.6, "Black People", "Hee hee haa"}

my\_set.add(6)

print("Set:", my\_set)

my\_set.remove(3.6)

print("Set:", my\_set)

my\_set.discard(500)

print("Set:", my\_set)

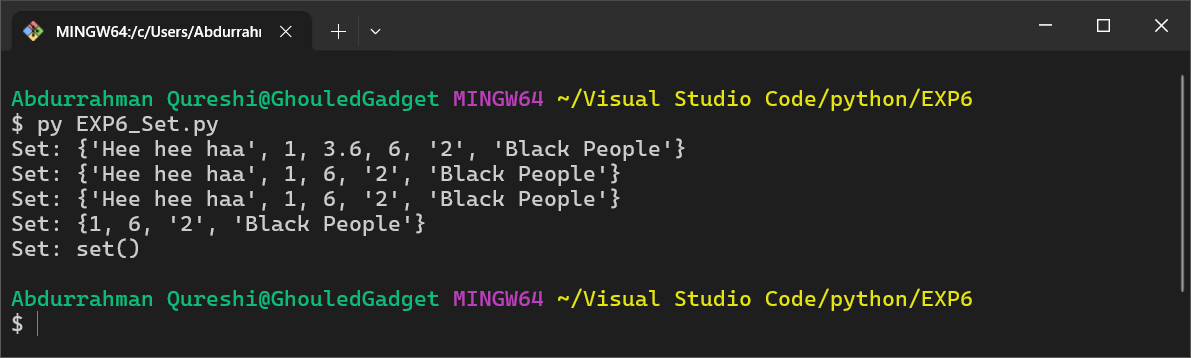
popped\_element = my\_set.pop()

print("Set:", my\_set)

my\_set.clear()

print("Set:", my\_set)

OUTPUT:



9) Write a python program to pickle tuples and strings.

CODE:

import pickle

data = {

    "tuple": (100, 200, 300),

    "string": "Aachar this string!"

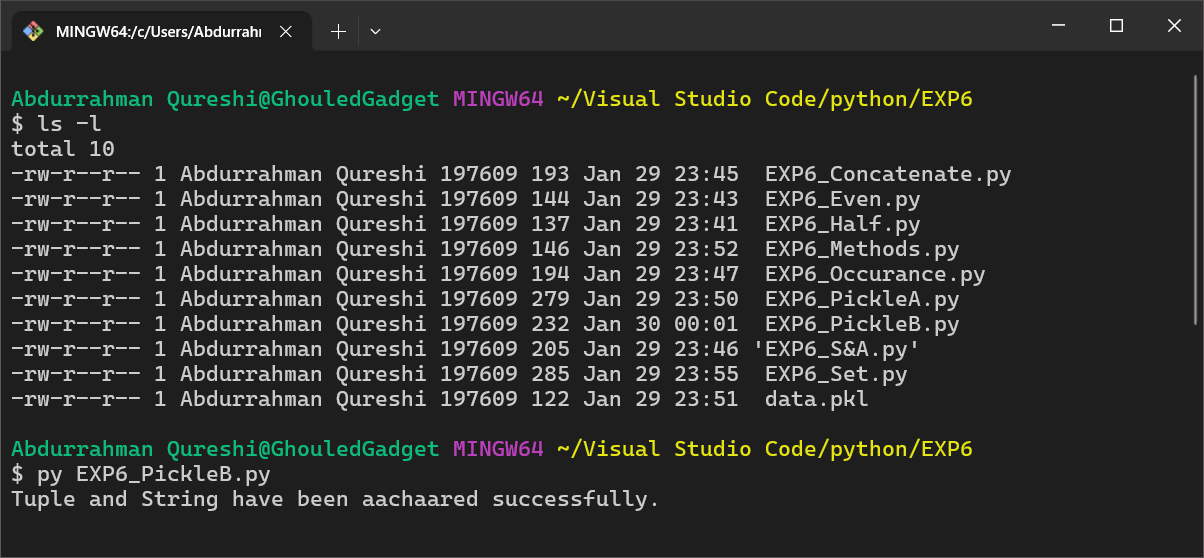
}

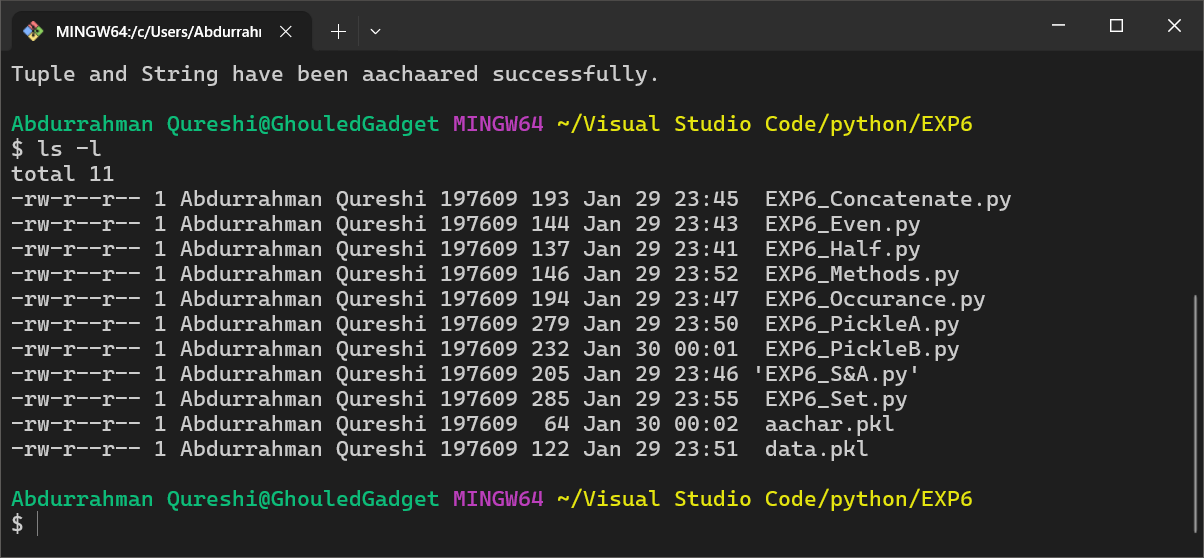
with open("aachar.pkl", "wb") as file:

    pickle.dump(data, file)

print("Tuple and String have been aachaared successfully.")

OUTPUT:





**10) Write a python program to implement snake ladder game using python dictionary**

CODE:

OUTPUT: