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Python Workshop Series

Department of Computer Science – OUSL

Activity 05

The activity given is as follows.

Write a Python program that creates a multiplication table for a given number and stores the results in an array. The program should:

1. Ask the user to input a number for which the multiplication table will be created.
2. Use an array to store the results of the multiplication table from 1 to 10.
3. Display the array and print each multiplication result in a readable format.

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1. Entire code runs inside a *while loop*

2. The number to input must be taken. Code goes follow.

   input_number = input("the number: ")

3. A way to stop the program must be set up.

   if input_number == 'q'or input_number =='Q':

   break

4. One to ten consecutive numbers are created and stored in an array.

   elif input_number.isdigit():

   one_to_ten_array = [i for i in range(1,11)]

5. The input number is stored in an array ten times.

   input_number_array = [int(input_number) for j in range(1,11)]

6. Multiplication is performed using above two arrays and is assigned into another array.

   multiplication = [one_to_ten_array[k]*input_number_array[k] for k in range(0,10)]

7. The readable format is done using the following code.

```
for p in range(0,10):
        if p == 0:
            print("The Readable Math Table\n----------------------------------------------")
        print(f"{one_to_ten_array[p]} x {input_number_array[p]} =
{multiplication[p]}\n")
```

This block is intentionally left blank

Final Code:

```
#18/1/2025
#This is the code for activity 5 of python workshop @ OUSL
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while True:

   print("----------------\nTHE MATH TABLE\npress q to quit\n----------------")

   input_number = input("the number: ")

   if input_number == 'q'or input_number =='Q':
      break
   elif input_number.isdigit():
      one_to_ten_array = [i for i in range(1,11)]
      #print(one_to_ten_array)

      input_number_array = [int(input_number) for j in range(1,11)]
      #print(input_number_array)

      multiplication = [one_to_ten_array[k]*input_number_array[k] for k in range(0,10)]
      print(f"\nThe Array of Multiplication Table\n----------------------------------------------
\n{multiplication}\n")



      for p in range(0,10):
         if p == 0:
            print("The Readable Math Table\n-------------------------------------------")
         print(f"{one_to_ten_array[p]} x {input_number_array[p]} = {multiplication[p]}\n")

   else:
      print("Invalid input! Please try again.")
```

Q_01_Activity_05.py - D:\GitHubProjects\Python_Workshop_Series_OUSL\Q_01_Activity_05.py (3.13.1)

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```
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while True:

    print("----------------\nTHE MATH TABLE\npress q to quit\n----------------")

    input_number = input("the number: ")

    if input_number == 'q'or input_number =='Q':
        break
    elif input_number.isdigit():
        one_to_ten_array = [i for i in range(1,11)]
        #print(one_to_ten_array)

        input_number_array = [int(input_number) for j in range(1,11)]
        #print(input_number_array)

        multiplication = [one_to_ten_array[k]*input_number_array[k] for k in range(0,10)]
        print(f"\nThe Array of Multiplication Table\n-------------------------------------------\n{multiplication}\n")


        for p in range(0,10):
            if p == 0:
                print("The Readable Math Table\n-------------------------------------------")
            print(f"{one_to_ten_array[p]} x {input_number_array[p]} = {multiplication[p]}\n")

    else:
        print("Invalid input! Please try again.")
```

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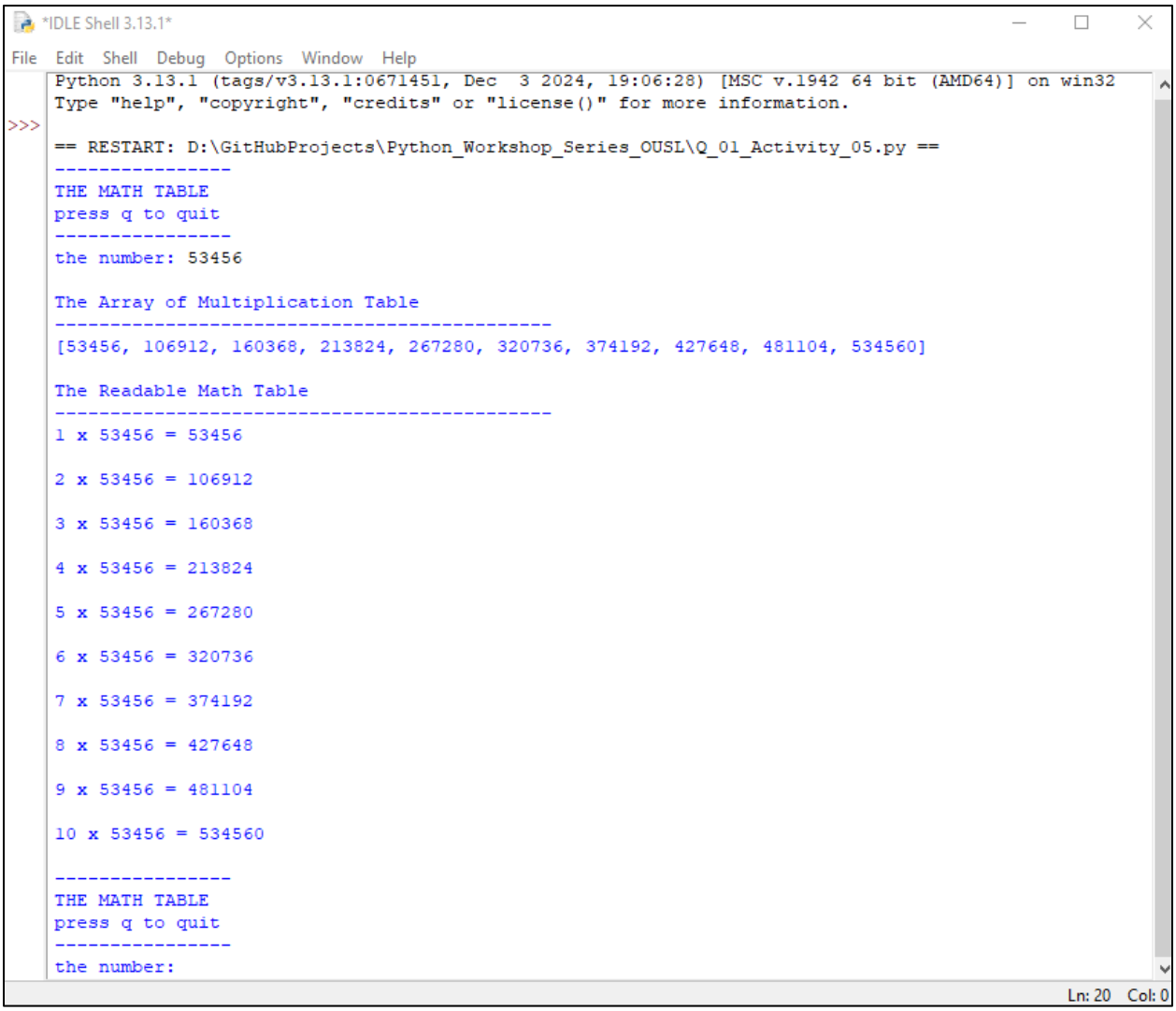

Dear sir/madam, please visit repositories for more information:

https://github.com/loachana/Python_Workshop_Series_OUSL.git