Midterm Lab Task 2.
Using Loops and Selection statements

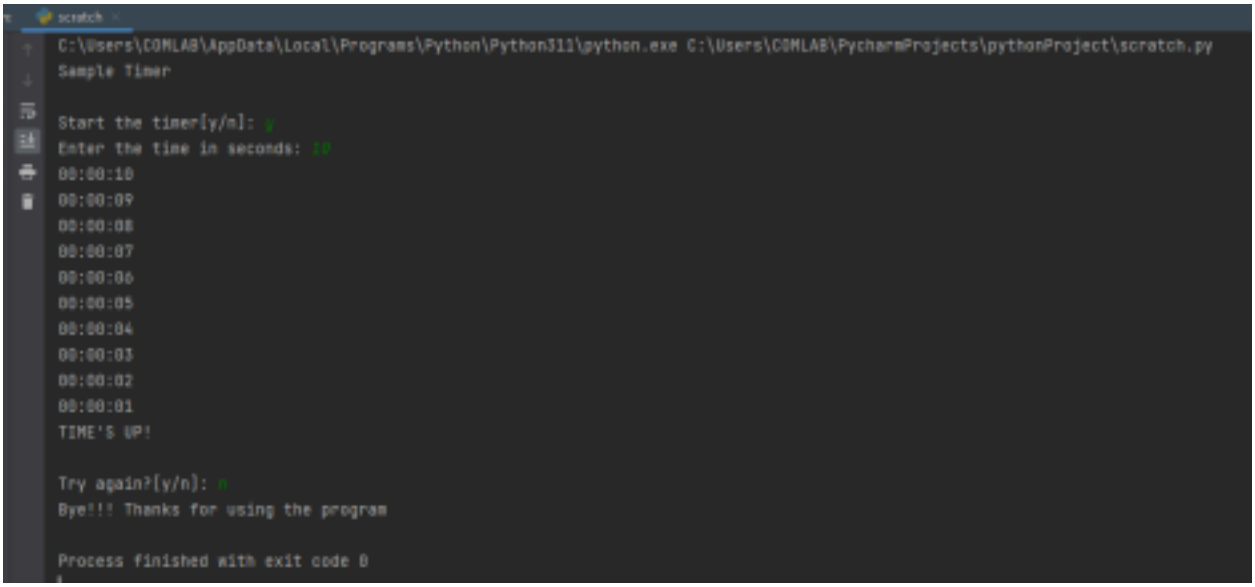
Problem 1.

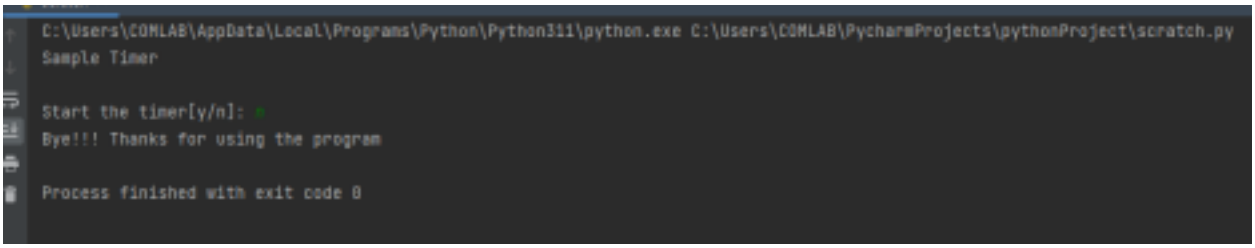
Create a countdown timer, where the user is prompted to enter time in seconds and will countdown to zero (set timer delay to 1) using timer.sleep(time_lapse). The program should prompt the user to test the timer if the answer is ‘y’ it will ask the user to enter time in seconds. If the answer is ‘n’ it will terminate the timer. Your response to y or n should be case insensitive.

Code:

```
import time
print("Sample Timer\n")
while True:
    start = input("Start the timer[y/n]: ").strip().lower()
    if start != "y":
        print("Bye!!! Thanks for using the program")
        break

    my_time = int(input("Enter the time in seconds: "))

    for t in range(my_time, 0, -1):
        hours = t // 3600
        minutes = (t % 3600) // 60
        seconds = t % 60
        print(f"{hours:02}:{minutes:02}:{seconds:02}")
        time.sleep(1)

    print("TIME'S UP!")

    again = input("\nTry again?[y/n]: ").strip().lower()
    if again != "y":
        print("Bye!!! Thanks for using the program")
        break
```

Output:





Problem 2.

Create an n x n Multiplication table using **Nested FOR Loop.** The user must enter the number of rows and columns that will be displayed in the Table.

Code:

```
rows = int(input("How many rows:"))
cols = int(input("How many columns:"))
print("\nMultiplication Table\n")
for i in range(1, rows + 1):
    for j in range(1, cols + 1):
        print(f"{i * j:4}", end="")
    print()
```

Output:

#1

```
C:\Users\COMLAB\AppData\Local\Programs\Python\Python311\python.exe C:\Users\COMLAB\PycharmProjects\pythonProject\sctch.py
How many rows:10
How many columns:10

Multiplication Table

   1   2   3   4   5   6   7   8   9  10
   2   4   6   8  10  12  14  16  18  20
   3   6   9  12  15  18  21  24  27  30
   4   8  12  16  20  24  28  32  36  40
   5  10  15  20  25  30  35  40  45  50
   6  12  18  24  30  36  42  48  54  60
   7  14  21  28  35  42  49  56  63  70
   8  16  24  32  40  48  56  64  72  80
   9  18  27  36  45  54  63  72  81  90
  10  20  30  40  50  60  70  80  90 100

Process finished with exit code 0
```

#2

```
C:\Users\COMLAB\AppData\Local\Programs\Python\Python311\python.exe C:\Users\COMLAB\PycharmProjects\pythonProject\sctch.py
How many rows:3
How many columns:5

Multiplication Table

   1   2   3   4   5
   2   4   6   8  10
   3   6   9  12  15

Process finished with exit code 0
```