

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 second. If the answer is 'n' it will terminate the timer. Your response to y or n should be case insensitive.

```
import time
choice = input("Do you want to start the timer?(Y/N):")
while True:
    if choice == 'y' or choice == 'Y':
        i = int(input("Enter Time:"))
        for t in range(i, 0, -1):
            seconds = t % 60
            hours = t // 3600
            minutes = (t // 60) % 60
            print(f"{hours:02}:{minutes:02}:{seconds:02}")
            time.sleep(1)
        print("TIMES UP!!!")
        choice = input("Try Again?(Y/N): ")
    else:
        print("Bye!!! Thanks for using the program")
        break
```

Sample Output:

```
Do you want to start the timer?(Y/N):Y
Enter Time:10
00:00:10
00:00:09
00:00:08
00:00:07
00:00:06
00:00:05
00:00:04
00:00:03
00:00:02
00:00:01
TIMES UP!!!
Try Again?(Y/N): Y
Enter Time:5
00:00:05
00:00:04
00:00:03
00:00:02
00:00:01
TIMES UP!!!
Try Again?(Y/N): N
Bye!!! Thanks for using the program
```

Problem 2.

```
r = int(input("how many rows: "))
c = int(input("how many rows: "))
print("\t\tMultiplication Table")
for r1 in range(1, c + 1):
    for c1 in range(1, c + 1):
        print(r1 * c1, end="\t")
    print()
```

output.

```
how many rows: 10
how many rows: 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
```

```
how many rows: 3
how many rows: 5
    Multiplication Table
1  2  3  4  5
2  4  6  8  10
3  6  9  12 15
4  8  12 16 20
5  10 15 20 25
```