CECS 174 - Project 1
“Alarm”
Due date: 02/20/22
PL Issue - 027962816

Team:

Student Name: Alfredo Regla
Student ID: 027962816
I certify that this submission is my original work

Alfredo Regla

Student Name: Joshua Correa
Student ID: 029196984

I certify that this submission is my original work

Joshua Correa

Project Report: Programming Project 1 - “Alarm”

1. **Goal:**
   Our goal was to take the current hour (in military time) and output when an alarm will go off in day(s) and hours.

2. **Problem Description:**
   We were required to implement a system that takes the current time in hours and the length of an alarm also in hours to produce when the alarm would go off in days and hours.

3. **Program Description:**
   a.
   First, we took the inputs of “current time” and “alarm time.” Then we added those times together into a new variable called “total time.” We took the total time variable and floor divided it with the number 24 (the total number of hours in a day), this gave us the new variable “alarm days”. Similarly, we took the total time variable and used modulo with the number 24, this gave us a new variable “alarm hours”. Finally, we used the alarm hours and alarm days to print the output, “‘The alarm will sound in’, alarm_days, ‘day(s) at’, alarm_hours, ’hours’".

b.

The test cases we chose for the Project were 23 for the current time and 3 for the alarm time. This test case was perfect for the project because it allowed us to make sure the program accounted for the alarm hours going over 24. We also chose this test case because it was given as an example on Prairie Learn with the output, and with that, we can compare and achieve the right output. We also chose current time 3 and alarm time 12, which was another example given by the Prairie Learn prompt.

4. **Program Implementation:**

a.

The only data types we used were int. The operation we used is the double divide sign which divides but also rounds down to the lowest number. We also used modulo which divides 2 numbers and the remainder is the answer. We also added the time hours and alarm hours. The functions we used were asking the user for the current hour and also how many alarm hours you want**.**

b.

The most challenging part was figuring out how to put the remainder because we tried many different things but none of it was working such as creating an if statement and also subtracting the time hours from the total time but that didn't work until we were suggested to use modulo.

c.

I think the most interesting was figuring out the modulo because I tried making an if statement but the easiest way was to use the modulo to get the remainder and get the hours. The most straightforward part was asking the user for the input as we have done it before.

d.

After I finished, I ran random numbers and it ran as expected, everything ran as it should.

e.

Our program handled bad input by just providing an error. If the user inputs a letter the console will just tell you that it was expecting an integer and provide an error.

f.

The only bug we have is that when the user enters a letter the whole code crashes but an integer is expected.

g.

The error we had is that we couldn't get the remainder of the total time, we tried dividing the total time by 24 then subtracting it but the total time but that wasn't going to work until we were suggested to use the modulo because that does it for you.

5. **Conclusion:**

a.

What went well is that we collaborated and worked together. We both thought of ideas, such as creating the variables timeHour & remainder, and also thought of using the modulo to get the leftovers for the leftover time.

b.

I think the best thing to do when coding is to start coding and trying things out. When I first started I wasn't coding and just brainstorming and writing things out but not writing the code, so next time I think I will brainstorm by writing code instead.

c.

I think the instructions were pretty clear because they gave us what to do as writing the inputs and creating variables.

d.

I think what would be better before is the teacher doing code with us towards the project but something easier. Such as this one but maybe involving the same things like creating variables and inputting time while also using the modulo.

Appendix:
Project Alarm source code ⤵

main.py

```
input_time_hours = int(input("Enter current hour: ")) # Asks the user for the current hours

input_alarm_hours = int(input("Enter alarm hours: ")) # Asks the user for how many hours they want their alarm to be for

totalTime = input_time_hours + input_alarm_hours # This adds both inputs to get the total number of hours

alarm_days = totalTime // 24 # This divides the total amount of hours by 24 to get the amount of days.
alarm_hours = totalTime % 24 # The modulo gets the remainder of the total amount of hours by 24 so we can get the hours

print("The alarm will sound in", alarm_days, "day(s) at", alarm_hours,"hours") # This print statement prints all the outputs so the user can read
```

Project Alarm Output ⤵