

Assignment1

Before doing this assignment, you should already know the following things:

- Define and use variables in C++
- Simple operator in C++ (+, -, *, /, %)
- How the computer stores signed integers
- Define, initialize and use struct

Review Questions

(You should write the answers to the following questions in the same file)

1. Please write down the upper and lower bound of the following types:
 - For example: `uint16_t`: 0~65535
 - `uint8_t`
 - `int8_t`
 - `int16_t`(Please read [this page](#) if you do not know `uint8_t` and `int8_t`)
2. What is the difference between the following values (What is their default type in C++)
2022 2022L 2022.0 2022.0f
3. Define a structure, which includes year, month, day and time information. Then define a variable of this structure and initialize it.

Programing Exercise

We have provided the skeleton code ([exer1_1.cpp](#) and [exer1_2.cpp](#)), you only need to complete the calculation part. For compiling and running the code, using the following commend lines:

```
# compile
g++ -o exer_run1_1 exer1_1.cpp
g++ -o exer_run1_2 exer1_2.cpp
# run
./exer_run1_1
./exer_run1_2
```

If you want to know more about compiling with g++, click [here](#)

1. Write a program that asks the user to enter the number of **seconds** as an **integer value (use type long)** and that then displays the equivalent time in **days, hours, minutes, and seconds**. The output should look like this: Enter the number of seconds: 31600000 31600000 seconds = 365 days, 17 hours, 46 minutes, 40 seconds

2. Write a program that asks the user to enter the number of **hours** as an **float value (use type float)** and that then displays the equivalent time in **hours, minutes, and seconds** (Ignore the fractional part of second). The output should look like this: Enter the number of hours: 7.244 7.244 hours = 7 hours, 14 minutes, 38 seconds

DO NOT FORGET TO COMMIT AND PUSH YOU CODE 😊