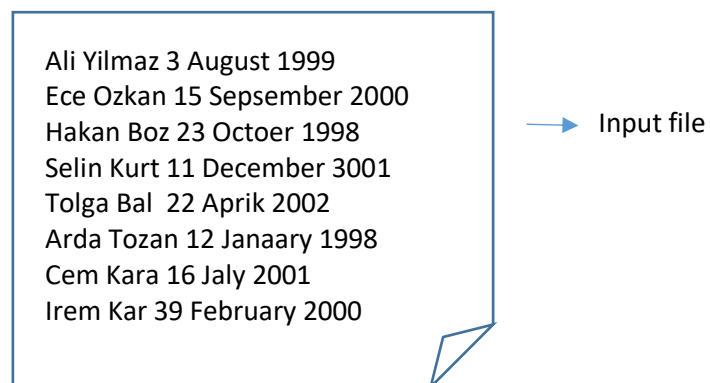# CMPE225 – OBJECT-ORIENTED PROGRAMMING

HOMEWORK III

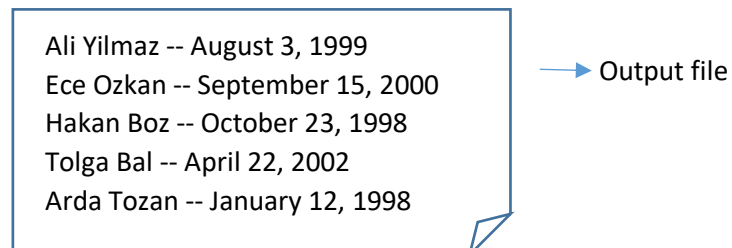**Instructors:** Çiğdem TURHAN, Güler KALEM

Assistants: Buğra Yener ŞAHİNOĞLU, Gizem ALTINAY
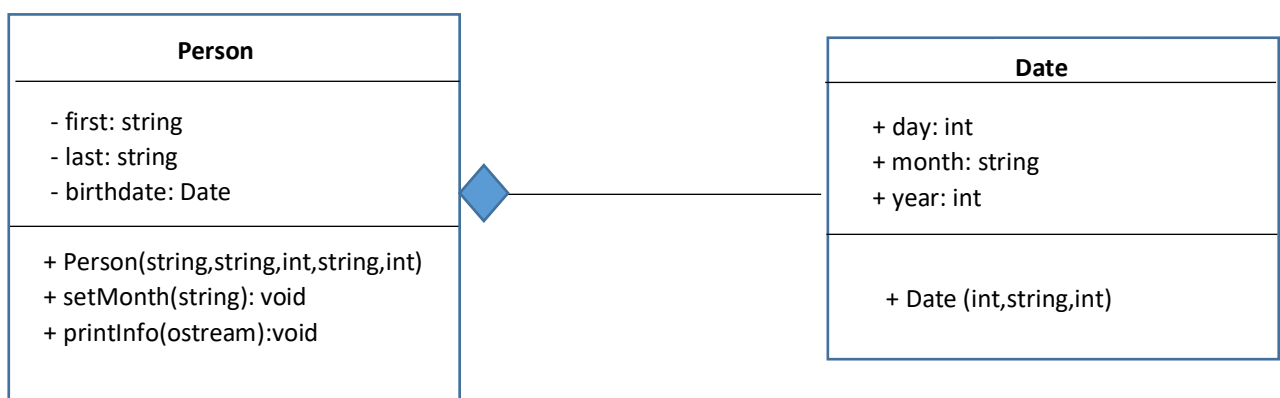
Due Date: June 1, 2020 23:59

Write a C++ program to find and if possible correct the errors written in an ***input file***. The input file as shown below consists of first and last names of people as well as their birthdates on each line:

Ali Yilmaz 3 August 1999
Ece Ozkan 15 Sepsember 2000
Hakan Boz 23 Octoer 1998
Selin Kurt 11 December 3001
Tolga Bal 22 Aprik 2002
Arda Tozan 12 Janaary 1998
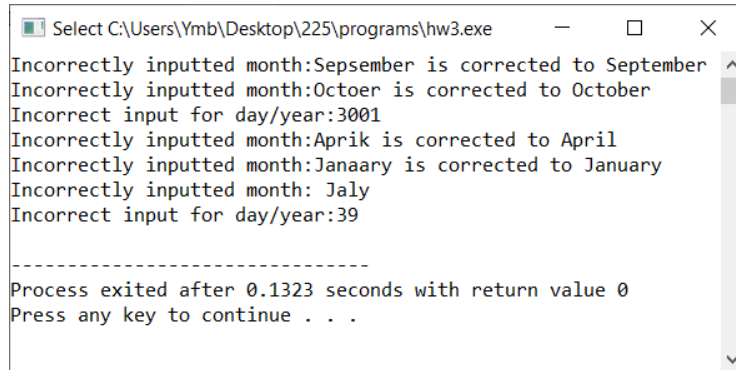Cem Kara 16 Jaly 2001
Irem Kar 39 February 2000

→ Input file

As you can see from the file, the day, month or year of the birthdate might be incorrectly entered. You are expected to discard the input if the day and year are incorrect, and try to correct the month. To correct the month, check the first 3 characters, if it matches one of the 12 months, correct it. For example, if "Sepsember" is entered, its first 3 characters match "September", so correct it accordingly. Output all the correcty entered or corrected inputs onto ***another file*** as shown below:

Ali Yilmaz -- August 3, 1999
Ece Ozkan -- September 15, 2000
Hakan Boz -- October 23, 1998
Tolga Bal -- April 22, 2002
Arda Tozan -- January 12, 1998

→ Output file

In your program, implement the following classes using ***composition***:

Person
- first: string   - last: string   - birthdate: Date
+ Person(string,string,int,string,int)   + setMonth(string): void   + printInfo(ostream):void

Date
+ day: int   + month: string   + year: int
+ Date (int,string,int)

Your main program should input each line from the input file, and using **exception handling,** check the day, month and year. If exceptions are thrown, in your first catch routine, output an error message if day or year is incorrect. In your second catch, try to correct the month according to the first 3 characters. If you can correct the month, output the corrected information onto the output file. A sample output of the catch routines will be as follows:

```
Select C:\Users\Ymb\Desktop\225\programs\hw3.exe          —    □    ×

Incorrectly inputted month:Sepsember is corrected to September
Incorrectly inputted month:Octoer is corrected to October
Incorrect input for day/year:3001
Incorrectly inputted month:Aprik is corrected to April
Incorrectly inputted month:Janaary is corrected to January
Incorrectly inputted month: Jaly
Incorrect input for day/year:39


--------------------------------
Process exited after 0.1323 seconds with return value 0
Press any key to continue . . .
```

Hints:

1. To check the first 3 characters of a string, you can use the `substr()` function in the string header file.
    `st.substr(x,n)`: returns n characters from the string st starting from position x.
2. To make your job easier, you may think about putting the 12 months into an array of strings.

IMPORTANT NOTES:

- Cheating will NOT be tolerated. Special software will be used to verify if the submitted homework is your original work or copied from someone/somewhere else. If any case of cheating is detected, at any time, **you will get ZERO from your homework.**
- You should upload your homework file to the Moodle system.
- The name of your homework file should be **"StudentID_HwNumber.cpp",** for example: "11122233_hw1.cpp"
- You should use indentation and comments in your code.
- Late submissions will be evaluated by using formula $100-20*d^2$ where d is the number of late submission days.
- If there is any type of compiling error or runtime error seen in your code, your code evaluated by the half of the maximum evaluation score. (Late submissions will change the maximum evaluation score.)