PL190μ Introduction to the Go Programming Language

Coding 3: Contact book

This assessment evaluates the following competencies:

- *GP001 – Correctly use the syntax of Go programming*   *(+1)*
- *GP101 – Write, compile and execute a single source file Go program with the command line (+1)*
- *GP002 – Use basic built-in data structure: array, slice and map*   *(+1)*
- *GP003 – Manipulate structures and define methods manipulating them*   *(+2)*
- *GP004 – Use functions from the Go standard library given their specification*   *(+1)*

You may also be assessed on the following competencies:

- *GP301 – Handle rigorously the errors when calling function*   *(+1)*

In this coding assessment, you have to complete an existing Go program that reads a contact book from a JSON file and computes the mean year of all the birthdays of your contacts [1]. The actual code does compile, but does not compute the correct result. First, you have to fix it by:

- updating the definition of the `ContactBook` structure (you can use the `Time` structure from the `time` package of the Go standard library to represent the birthdates);
- implementing the `meanBirthYear` function.

To succeed the assignment, you have to explain to the teacher how you fixed the program. For the given `contacts.json` file, the program must print the following result:

```
Mean birth year: 1958.29
```

Optionally, you can also improve the `main` function by handling properly the errors that may occur when calling the `ReadFile` and `Unmarshal` functions.

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[1]The code can be found here: https://github.com/ukonline/uCourse/tree/master/PL190%C2%B5/code/contactbook