

4TIN303U - PROGRAMMATION C

File handling

► **Exercise 1.** We define the following structure:

```
typedef struct {  
    char name[SIZE];  
    unsigned int number;  
    int* values;  
} sequence;
```

A variable of this structure represents the first **number** elements of a sequence.

- Write a function `void printSequence (sequence* seq)` that prints on the standard output the following message:

```
5 first numbers of the Fibonacci sequence:  
1 1 2 3 5
```

where 5 is replaced by **number**, Fibonacci by **name**, and the sequence of number the one stored in **values**

- What should be changed in the previous function to obtain the function `void writeSequence (FILE *file, sequence* seq)` which writes the same thing, but in a file opened in the program?
- What would you do to implement the function `printSequence` from the function `writeSequence`?
- Write a function `void readSequence (FILE *file, sequence* seq)` which reads the next two lines of a file, and interprets them as if they were written by the function `writeSequence`, to fill the sequence `seq`. The space for the sequence object will be assumed to be allocated, but you will need to allocate space to store the numbers.
- Write a function `main` which makes the user enter text in the above format, stores the information in a sequence variable and then writes it to a foo file. Test your program.