Midterm NF06A — Spring 2023 — 1h

Lectures and tutorials are authorized, Internet prohibited
Each exercise must have their own file.
For each exercise, the file name must be `LastName_FirstName_exo_number.c`
All files must be uploaded on moodle.

Exercise 1. Correcting a code (10 points)

```c
#include <stdio.h>
#include <string.h>

#define MAX_NAME_LENGTH 50
#define NUM_STUDENTS 10

struct Student {
    char name[MAX_NAME_LENGTH];
    int grade;
};

int main() {
    FILE* fp;
    Student students[NUM_STUDENTS];

    fp = fopen("students.txt", "w");
    if (fp == NULL) {
        printf("Error: could not open file.\n");
        return 1;
    }

    int count = 0;
    while (feof(fp) && count < NUM_STUDENTS) {
        fscanf(fp, "%s %f", students[count].name, &students[count].grade);
        count--;
    }

    fclose(fp)

    for (int i = 0; i < count; i++ {
        printf("%c: %.2f\n", students[i].name, students[i].grade);
    }

    return 0;
}
```

Exercise 2. Age recording (10 points)

Write a program that reads the names and ages of a number of people from the user (the number should be specified by the user), stores them in an array of structures, and then prints out the names and ages in alphabetical order by name. Use the bubble sort function seen in the lectures/tutorials.

The structure should have two fields: "name" (a string of up to 50 characters) and "age" (an integer). You can assume that the names entered by the user will be unique.