

Computer Programming 1 2nd Midterm Exam December 21st 2016

- You have 2 hours to complete the assignment.
- If the code does not compile, the exam won't be accepted for submission.
- Tests are provided to check if your code is correct. **You cannot modify the tests!!**
- If a test does not pass, that exercise won't be accepted for submission.
- Code is expected to be readable, clean and optimal.
- A skeleton of the exam is provided. Feel free to add more files and/or include more libraries if you need them.
- To check if your code is correct, you can write the code you need in the **main()** of the file *midterm2.c*, but leave it **empty before submitting the exam!**
- Inside the code, replace **"INSERT YOUR NAME HERE"** with your name and last name.
- When you finish, *ZIP the whole folder* with a filename called **"lastname_name.zip"** and upload it to **"Midterm 2 Exam"** folder.

1. **(3 points)** Implement the function ***minPlusMax(...)*** that given an array of integers and the size of the array, returns the sum of the minimum and the maximum values of the array. *You can suppose that the array has, at least, one element.*
2. **(4 points)** In a tile-based videogame, where each tile contains 8x8 pixels, we need to compare two given tiles to know if they are equal or not.



In order to do this:

- Create the new data type ***pixel***, which contains 3 bytes (***r***, ***g*** and ***b***) to store the color of the pixel.
 - Implement the function ***compareTiles(...)***, that given two tiles returns **1** if they are equal (pixels with the same colors), and **0** otherwise.
3. **(3 points)** Implement the function ***countWordInFile(...)*** that given a filename and a word (string), returns the number of occurrences of the word in the given file.