

## 1) Git

a) Create a new folder named GitHashingExercise. Create a text file named README.md in your repository and write a brief description (a few words) of the project.

b) Generate a unique 4-digit integer, i.e. by using the last four digits of your student ID (AEM). Create a script in a shell of your choice named hash\_script, where it should take a 4-digit integer as input and output a hash of the input. You can use any standard hashing algorithm (like SHA-256), run the script with your unique 4-digit integer and save the output in a file named hash\_output.txt. Use Git commands to add and commit hash\_script and hash\_output.txt to your local repository. Lastly, create a new public repository named GitHashingExercise on github.com and push your local commits to the remote repository.

Note: Ensure that you have an account on github.com. Presentation 4 contains information how to do so. You DO NOT need academic verification for a regular Github account, so don't need to wait on verification in order to complete the exercise.

## 2) Signals

a) Write a C program mysigcatch.c that catches the SIGINT signal (usually generated by the Ctrl+C command in the terminal). Upon catching the signal, the program should print "SIGINT signal caught!" and then terminate gracefully.

b) Modify your program, in mysigcatchmodified.c in order to use a custom signal handler function. In the custom handler, display the signal number of SIGINT and a message indicating that the signal was caught. After catching SIGINT twice, the program should restore the default behavior for SIGINT and terminate upon the next signal reception.

c) Download code-lab-4 from elearning. Write in a small summary (a couple of lines) i) how all codes are executed, ii) an example usage and its output and iii) a brief explanation of the actual C code.

E.g. ./immun2ctrlC 5 runs the process with sleep time 5 seconds and in the meantime pressing Ctrl+C gets captured/handled and then ignored by this signal(SIGINT, SIG\_IGN); Not much to show in terms of actual output since it's just a printout of sleeping for: 5 sec.

In /home/deadpool/quiz-4 you should have the following files:

hash\_script

hash\_output.txt

repo.txt (where you will just have a link to your github repo, e.g. <https://github.com/deadpool/GitHashingExercise.git> so git cloning this URL will actually clone the repo)

code-lab-4-explained.txt (where you will answer (2d))

mysigcatch.c

mysigcatchmodified.c

Regarding elearning, as usual, tarball the above folder and upload a single .tar.gz.