Group: C
Surname: **Name:**
Date: **Email:**

SpaceGame

Fill in the following Google form and return to these instructions when asked to do so in the Google form:

http://goo.gl/forms/dMX9mgruYI

STEP1: Please, read the following brief introduction
SpaceGame is a demonstrator for the framework GAME (Geometrical Ascii Multigame Environment), a C language framework for creating geometrical games using *ncurses* text screens. Input to SpaceGame comes from an ASCII keyboard; output goes to an ASCII terminal. The most important input keys for SpaceGame are:

- 'h', 'j', 'k', 'l' (alt: '4', '2', '8', '6'): move West, South, North, East
- '7', '9', '1', '3': move North-West, North-East, South-West, South-East
- 's': stop
- 'q': quit

It is possible to run SpaceGame in batch mode by passing in a command line string that contains the input keys to be executed (e.g., `./game jjll`). When executed in batch mode, SpaceGame prints the sequence of coordinate changes associated with the input keys.

STEP2: Compile, execute and practice
- Download the code from:
    - `http://selab.fbk.eu/asp/SpaceGame-C1157.zip`
- Compile SpaceGame: inside directory `src`, run the command `make`; if in your distribution there is a subdirectory `game-server`, inside such subdirectory run the command `make`.
- Execute SpaceGame: if in your distribution there is a subdirectory `game-server`, run the command `game-server/space-server&` first; then, run the command `./game` (or `./game jjll` to try batch-mode execution).
- Practice with SpaceGame, playing SpaceGame for a few minutes, to get an understanding of how it can be played by users (**do NOT look at the source code in this phase!**)

STEP3: Please, read the following description of the hacking exercise
Modify the source code of SpaceGame so that the effect of every movement is doubled: whenever the user presses a movement key, the position on the screen shall change by two space units instead of one. For instance, in the original implementation whenever the user presses key 'j', the row where the player is displayed is incremented by one. With the tampered code, it should be incremented by two. If executed in batch mode, SpaceGame should print coordinate changes where coordinates differ by two space units instead of one. If your distribution includes the directory src/game-server, source code files under src/game-server must not be read or modified during the execution of the task. In any case, **you are allowed to read and modify only files game.c, gamespace.c, gamespace.h.**