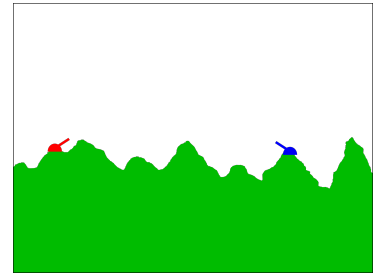


Python for Practice – Homework 1

The goal is to create a turn-based artillery game (see, e.g., the Scorched Earth game^{1 2}). The game screen consists of a terrain, on which the players are shown (as a small tank or cannon). The players in turns try to shoot each other (the winner is the last remaining player). The shooting is controlled by specifying the angle (from -180 till 180 degrees) and power of the shot (0 – 100). The projectile trajectory is influenced by the gravity (i.e., the shot curve is parabolic). The window edges are “rubber”, i.e., the projectiles bounce. The projectiles “draw” their flight trajectory (to allow the player to more accurately adjust the shot on their next turn).



Use either Tkinter or Kivy for graphics.

Required features:

- The shape of the terrain is randomly generated and resembles “mountains”.
- The complete game is visible in the window, i.e., the terrain does not scroll to left/right. Choose a suitable window size.
- The number of the players is configurable at the start of the game (via a text box or combo-box or similar). There are only “human” players (i.e., no AI players).
- The game manages a “hall of fame” list, where, at the end of the game, the winner can put his name. The size of the list is 10 last winners.

Optional features:

- There is wind (blowing at a random strength from right or left) that influences the projectiles, i.e., the shot curve is ballistic.
- The shot impacts influence the terrain, i.e., part of the terrain is removed.
- The terrain is larger than the game window, i.e., the terrain can be scrolled to left/right.
- There are also AI players.

¹ https://en.wikipedia.org/wiki/Scorched_Earth_%28video_game%29

² https://archive.org/details/msdos_Scorched_Earth_1991