Description of the C Coursework program

C Coursework program is about displaying a *robot* using an algorithm to search for a *marker* around a *grid* in a rectangular area, while avoiding four obstacles in a form of *blocks*.

There are two layers that are displayed while running the program:

- Background layer, which displays the grid, as well as an immovable reflective marker(gray filled square) and blocks(red filled squares), which are both randomly positioned at the start of the program.
- Foreground layer, which displays the robot(green triangle) moving around the grid.

The robot has x and y coordinates, as well as direction he is pointed at, which can be either north, east, south or west.

To compile the program, use:

gcc graphics.c gamefinal.c

To run the program, use:

./a.out | java -jar drawapp-2.0.jar

or

./a.exe | java -jar drawapp-2.0.jar

It is possible to use command line arguments when starting the program in order to choose robot's starting position and direction.

In order to do that, user should choose x and y coordinates that are between (including) 0 and 9, as well as one of the four cardinal directions that robot is going to be pointed at.

For example, for the robot to start at position (1,1) with direction *east*, it should look like this:

./a.out 1 1 east | java -jar drawapp-2.0.jar

Or like this:

./a.exe 1 1 east | java -jar drawapp-2.0.jar

Without typing in position and direction, robot will just start at its predetermined (default) position.