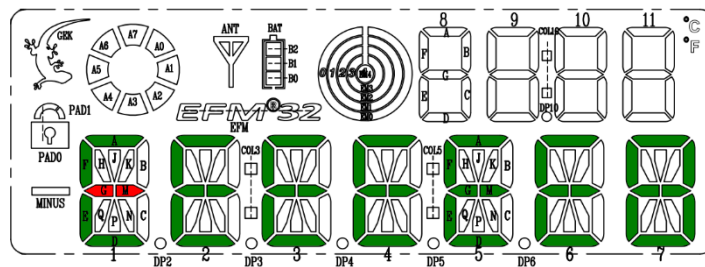


Asteroid zone (serial port)

Implement the following game on STK3700 board! The aim is to avoid as much asteroids as we can.

Specification

The map consists of the lower alphanumeric parts of the LCD display colored with green in the figure. The length of the spaceship is one segment apart from the horizontal positions in the middle in which case the body of the spaceship is displayed by two smaller segments G and M. Let the initial position be the two segments on the left side of the map (marked with red in the figure). In the beginning of the game display 3 randomly chosen segments besides the spaceship. These segments represent the asteroids to be avoided.



Gameplay

After launching the game the spaceship travels with a given initial speed. The spaceship's trajectory can be modified by **character 'l' (turn 90° to the left) and 'r' (turn 90° to the right) via the serial port** (note that the spaceship must not travel backwards on the map). Check whether the spaceship has moved onto a segment with an obstacle on it. If so, stop the game and make the decimal points blinking! If the spaceship leaves the map up or downwards it is supposed to return on the opposite side. On reaching the end of the map (last segments on the right side) the space ship must return on the left side in the same row in which it has left the map! In this case the old obstacles are being removed and 3 new appears. The program counts the number of successfully completed levels and displays it on the upper numeric display. Optionally the gameplay difficulty can be modified by increasing spaceship speed after each successfully completed level.