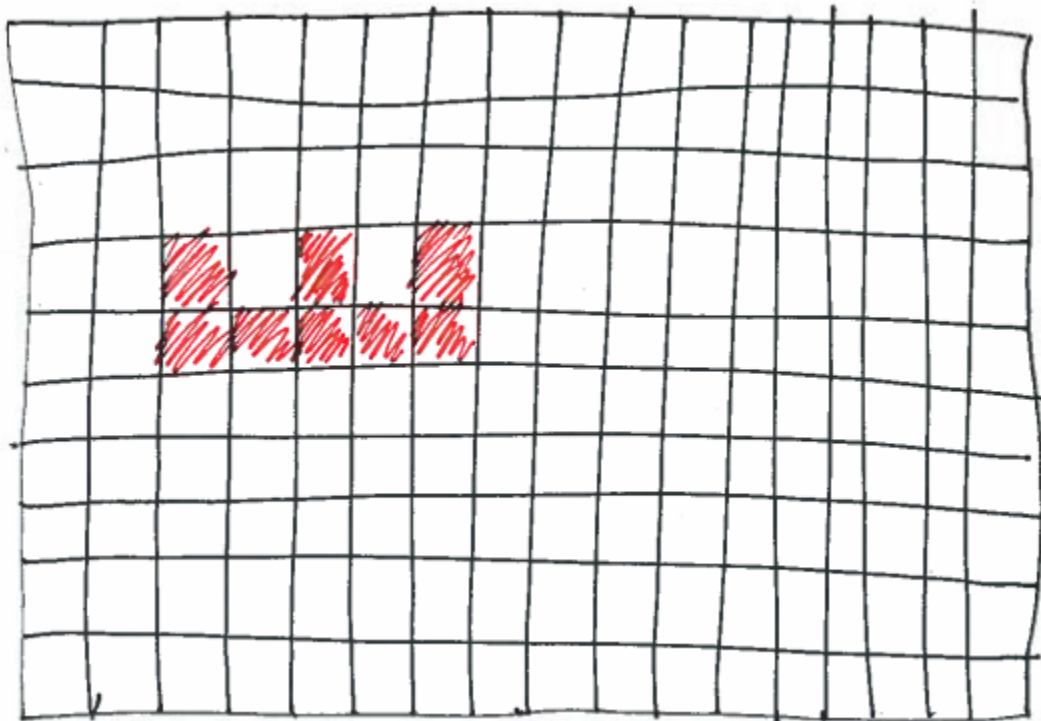


## Assignment 1

### Etch a Sketch

In this assignment, your job is to create an Etch-a-Sketch game. If you don't know what an Etch-a-Sketch is, look at the description on Wikipedia (See [http://en.wikipedia.org/wiki/Etch A Sketch](http://en.wikipedia.org/wiki/Etch_A_Sketch)).

In short, in this game, there is a drawing board provided that looks like a table (see diagram). There is a pen like instrument that is positioned somewhere completely randomly when the game begins. The user can move the instrument left, right, up or down. As the pen moves, it marks the cell it moved to. You can assume that when the game starts, the cell that the pen is on is already marked. In the diagram below, the cells filled with the red color are already marked.



Here are the rules of the game:

1. Assume a fixed sized grid. Say 50x50. Your program should print the grid in the following format. Each dot denotes a cell.

```
.....  
.....  
.....  
.....  
.....
```

2. Your program will take user input left (l) /right (r) / up(u)/ down(d) to move the pen.

3. After reading the user input, for any position that gets taken, replace the "." With an "o" character and print the grid again.
4. Your program should additionally support the following inputs quit(q)/ restart(r). Quit command should quit the game and restart should clear the current etch-a-sketch.
5. Current position in the grid should always be displayed by a big "X" letter.
6. If the user attempts an illegal move such as trying to go outside the table, print an error message and prompt the user for input again.
7. You MUST make sure user input is valid i.e. do not assume that the user will always enter correct input. If the user enters unexpected input, print an error message and prompt the user again to enter the correct input.