HÁSKÓLINN Í REYKJAVÍK
REYKJAVIK UNIVERSITY

T-303 HUGB

Design Report

Nafn teymis - A New Hope:

Aron Freyr Heiðarsson - aronh13@ru.is

Atli Freyr Einarsson - atlie13@ru.is

Halldís Una Hreiðarsdóttir - halldis13@ru.is

Hallgrímur Þórhallsson - hallgrimurt13@ru.is

Rannveig Guðmundsdóttir - rannveigg13@ru.is
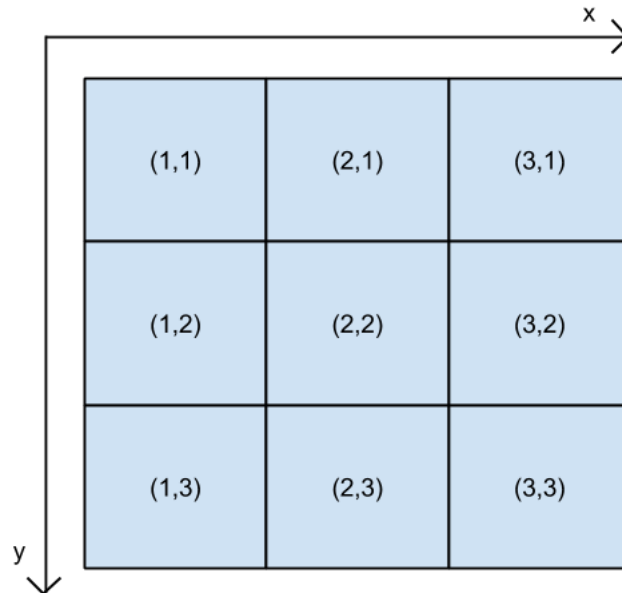
Kennari:

Hannes Pétursson

2. nóvember 2014

1 Introduction

The game TicTacToe is a web-application which can be run in Google Chrome browser. It was developed in Java using Github.

The board is constructed of 3x3 (x , y) coordinates as shown below. Players must type in the coordinates of the cell he/she wants to put the X or O in, and then press a button to confirm

2   Class diagram

There are four classes and two enums in the game, as seen in the class diagram below.
The class Game creates an instance of Board, which contains 3x3 Cells. The class GameWeb makes
the GUI for the game.

```
┌─────────────────────────────┐        ┌──────────────────────────────────┐
│ Game                        │        │ Board                            │
├─────────────────────────────┤        ├──────────────────────────────────┤
│ -board: Board               │        │ -cell: Cell[3][3]                │        ┌──────────────────────────┐
│ -currPlayer: Content        │        │ -winner: Content                 │        │ Cell                     │
│ -currState: State           │   1    │ -ROWS: int                       │  3x3   ├──────────────────────────┤
│ +Game():                    │        │ -COLS: int                       │        │ -content: Content        │
│ +init(): void               │        │ +Board():                        │        │ +Cell():                 │
│ +playerMove(int x, int y):  │        │ +init(): void                    │        └──────────────────────────┘
│ boolean                     │        │ +checkTie(): boolean             │
│ +nextPlayer(): void         │        │ +checkWin(): boolean             │
│ +getPlayer(): String        │        │ +checkRows(Content c): boolean   │
│ +main(String[] args): void  │        │ +checkCols(Content c): boolean   │
└─────────────────────────────┘        │ +checkDiags(Content c): boolean  │
                                        └──────────────────────────────────┘

┌─────────────────────────────┐        ┌──────────────────────────┐
│ GameWeb                     │        │ [Enum] Content           │
├─────────────────────────────┤        └──────────────────────────┘
│ +main(String[] args): void  │
│ +init(): void               │        ┌──────────────────────────┐
│ +buildTable(Game game):     │        │ [Enum] State             │
│ StringBuilder               │        └──────────────────────────┘
└─────────────────────────────┘
```