**Goals:**

* Demonstrate a Node.js and how Node.js is useful serverside javascript websites which are fast, and useful for data intensive realtime-applications
* Create a game-like application which displays on a large screen that will attract students who want to watch and or be active participants.
* Show a working web application that is HTML5/Node.js/Webserver based,
* Does not take up too much time to experience, maybe 3-5 mins .
* Build in an opening so that once students finish the game we can discuss the various aspects/components/technologies of the game.
* Optionally discuss or show how a modification can be made to the game to improve/enhance it.

**Maze idea**

* Generate a maze game, which includes the ability to generate a new solvable maze, modifiable in difficulty maze.
* Allow users to race each other ...multiple players at once
* For simplicity avoid requiring installation of an app...goal is to allow users to run on separate devices...be it tablets or laptops we provide and maybe even their phones.
* Results (and possibly stats for each player) are displayed on the big screen
* Rewards of small candy bars for playing (or just visiting?) and larger candy bars or prizes for breaking records perhaps.
* Need contact information handouts?
* Node.js is used for the main webserver and it collects data from the station 1, station 2, station 3, etc. The main screen displays stats like (keystrokes/mazes solved/minutes played/player name/ perhaps even each individual screen as it is being played)

**Components of the system:**

* Webserver Laptop -
* Wireless router (avoid being connected to the college network and just connect systems to our “temporary intranet”)
* 2-4 game stations - use the tablets, laptops or perhaps a student phone
* users are directed to the URL for their station <http://192.168.25.xxx/player1>
* Big screen (need to acquire one of these) shows the results … http:://localhost/results.html

**Game play ideas**

* Users are started with a maze and use cursor keys (or touchable part of screen if on tablet) to navigate maze
* Results are shown on the main screen…two ideas...either
  + Dynamically combined real-time display ….show all players on the same maze…. (use different colors and/or shapes for each player)
  + or each player has really small/quick mazes mazes and the combined results are data gathered from each users and graphed dynamically...number of cursor moves/mazes solved/time spent

**Links**

* <http://rosettacode.org/wiki/Maze#JavaScript>
* <http://s3.boskent.com/mazes/race.html>
* <http://www.codeproject.com/Articles/577080/Create-an-HTML5-and-JavaScript-Maze-Game-with-a-timer>

**Install Node**

http://nodejs.org/download/

**Setup for IntelliJ**

File -> Settings -> Plugins -> Install JetBrains plugin

Node.JS

GitHub Integration

Restart IntelliJ

File -> New Project Node.js project