Problem Definition

# Problem

Mr Dingle wants us to produce a game while practicing our programming and teamwork abilities.

# Needs

* Web Deployable
* HTML5
* CSS
* JavaScript
* User Input
* Graphics
* Menu System
* Snake Movement
* Snake Collision
* Snake Growth
* Score System
* Sound

The audience for the project is internet users; in particular those looking for an entertaining game.

# Objectives

* Web Deployable
  + The game needs to be accessible through the internet
* HTML5
* CSS
* JavaScript
* User Input
  + Get mouse coordinates and click events
  + Get mouse move coordinates
  + Get keystrokes
* Graphics
  + Button skins
  + Attractive background
* Menu System
  + Buttons
  + Value slider
  + Text
  + Images
  + Different screens
* Snake Movement
  + Move the snake forward, keeping the amount of displayed segments the same.
  + Move at certain interval
* Snake Collision
  + Detect what object is about to enter the snake’s body.
* Snake Growth
  + Add a segment to the back of the snake when an apple is eaten
* Score System
  + Display score
  + Increase score when food is eaten
* Sound
  + Play sound when button is clicked

As most browsers support HTML5 and JavaScript no external plugins would be needed to play the game.

# Boundaries

* Compatibility with different browsers
* Compatibility with old browsers
* Mobile Browsers

The game was tested with Internet Explorer 8 which does not support the HTML 5 canvas tag. External libraries were used to add this support. Most features of the game work except printing text and sound. After a while the browser becomes almost unresponsive possibly due to the way the external library renders the canvas. Too much time and effort would be required to fix the problem for a small minority of users at the moment and may be considered in the future.

# Notes for future projects

For future projects it would benefit by planning the solution beforehand and assigning responsibilities from the beginning. Using a revision control system such as GitHub can make collaboration easier. Keeping a project log for each individual member in the group will make it easier to see progress in the future