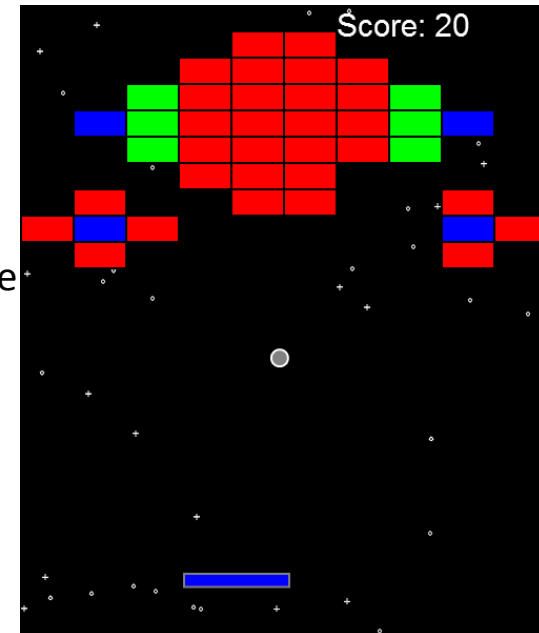# Animation

Exercise 2

Task

- Your task is to build a Breakout / Arkanoid game clone by using HTML5 and Javascript
- Game Overview
  - In the game, a layer of bricks lines the top third of the screen.
  - A ball travels across the screen, bouncing off the top and side walls of the screen.
  - When a brick is hit, the ball bounces away and the brick is destroyed.
  - The player loses a turn when the ball touches the bottom of the screen.
  - To prevent this from happening, the player has a movable paddle to bounce the ball upward, keeping it in play.
  - http://en.wikipedia.org/wiki/Breakout_%28video_game%29
- Video examples
  - http://www.youtube.com/watch?v=6pl2ocsxe44&feature=fvst
  - http://www.youtube.com/watch?v=z9WP1OIgBNo
- Start Material
  - You have a code base available, which to start from -> find it from the Oiva course web pages under Materials tab with name "Exercise 2 Start Material"

Scoring

Feature Description	Feature Score
Bricks with multiple colors	1
Totally configurable brick layout. Bricks can be set to form any shape on the screen.	2
Bricks disappear with animation effect when ball hits them	3
Ball collision detection and bouncing off the bricks. Brick destroyed when ball hits it.	4
Ball collision detection and bouncing off the player controllable paddle / club	1
Variable ball bounce angle from the paddle depending on the ball movement direction and where in the paddle the ball hits. This will allow a skilled player to control the bounce and direct where the ball bounces.	4
The game is over when all the bricks have been destroyed or the ball is lost at the bottom of the screen. A message pops up informing the player that the game is now over.	2
The code is formatted nicely with proper intendation. Make your code look professional by choosing and then using a coding convention.	2
Detailed code comments explaining your code	1

Delivery

- Deadline Friday 12th December 2014
- Return by compressing the whole exercise into one zip-packet and send it to teacher -> lasse.haverinen@oamk.fi
- You will personally demonstrate the game and explain its implementation to the teacher at a time and place agreed via email after you have submitted your work

Note

- Breakout game is a very common and popular programming exercise and therefore there are plenty of articles, blogs and web sites discussing the design and implementation of the game
  - You are encouraged to study them and learn from them, but NOT to copy from them

- Pirates beware!
  - Any copy from the Internet or from a classmate will be treated as a capital crime
  - Punishment is keelhauling and grade 0 for the course (FAIL)