

# Pinball Machine Design

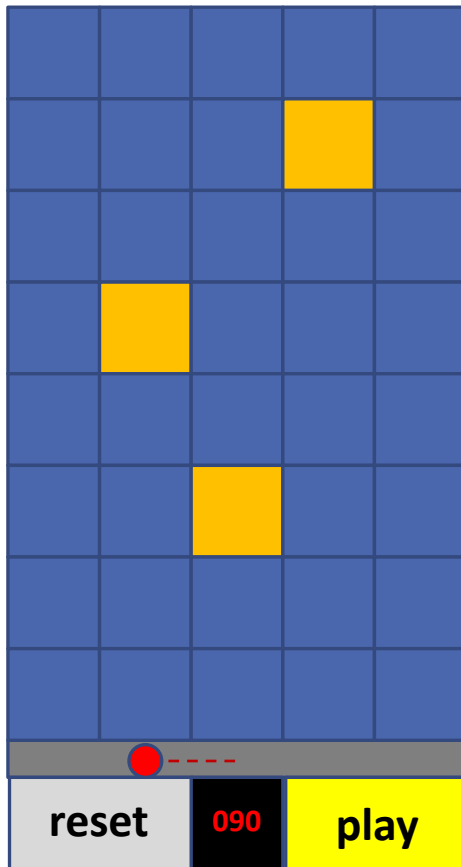
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GRUIA-CATALIN ROMAN

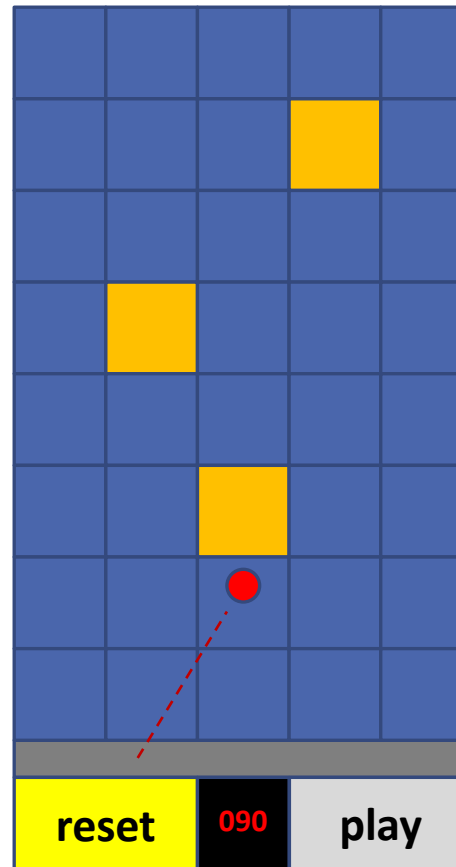
8 MAY 2018

# Screen Layout

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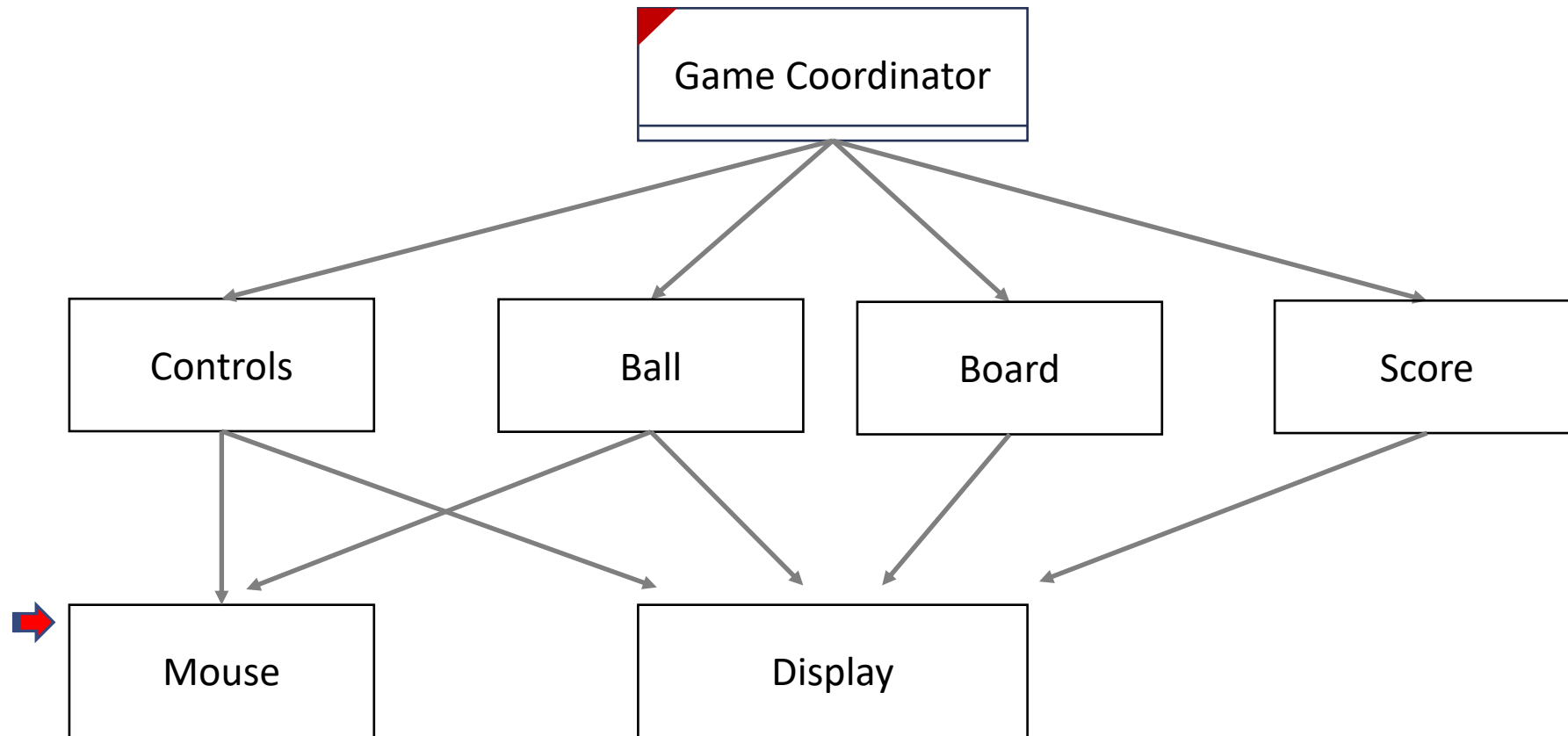
*In the reset state the ball can be moved left or right*



*At the start of the play state the ball was released in a random direction and moves in a straight line eventually reflecting on the walls*

# Proposed Design

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# Design Details

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- Display
  - getWidth()
  - getHeight()
  - getRows()
  - getColumns()
  - setBallAt(location)
  - setTileColor(row, col, state)
  - setPlayButton(state)
  - setResetButton(state)
  - setScoreValue(value)
- Ball
  - reset()
  - move() — active only after setInPlay() has been invoked; new position stops at the wall
  - getLocation() — (x,y)  
top left corner is (0,0)
  - setInPlay()
  - setOffPlay()
  - setStartLocation() — checks for the mouse location on the gray bar only after setOffPlay() has been invoked

# Design Details

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- Controls
  - `getMode()` — play or reset  
a mouse press on the active button changes mode; the mouse is polled
- Score
  - `reset()`
  - `getCurrentValue()` — value
  - `incrementBy(value)`

# Design Details

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- Board
  - reset()
  - touch(location) — points scored informs the board of the location of the ball; on touching a yellow tile the color changes and the points are returned; on touching a blue tile zero points are returned