
# Snake Project

## Students:

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# Outline

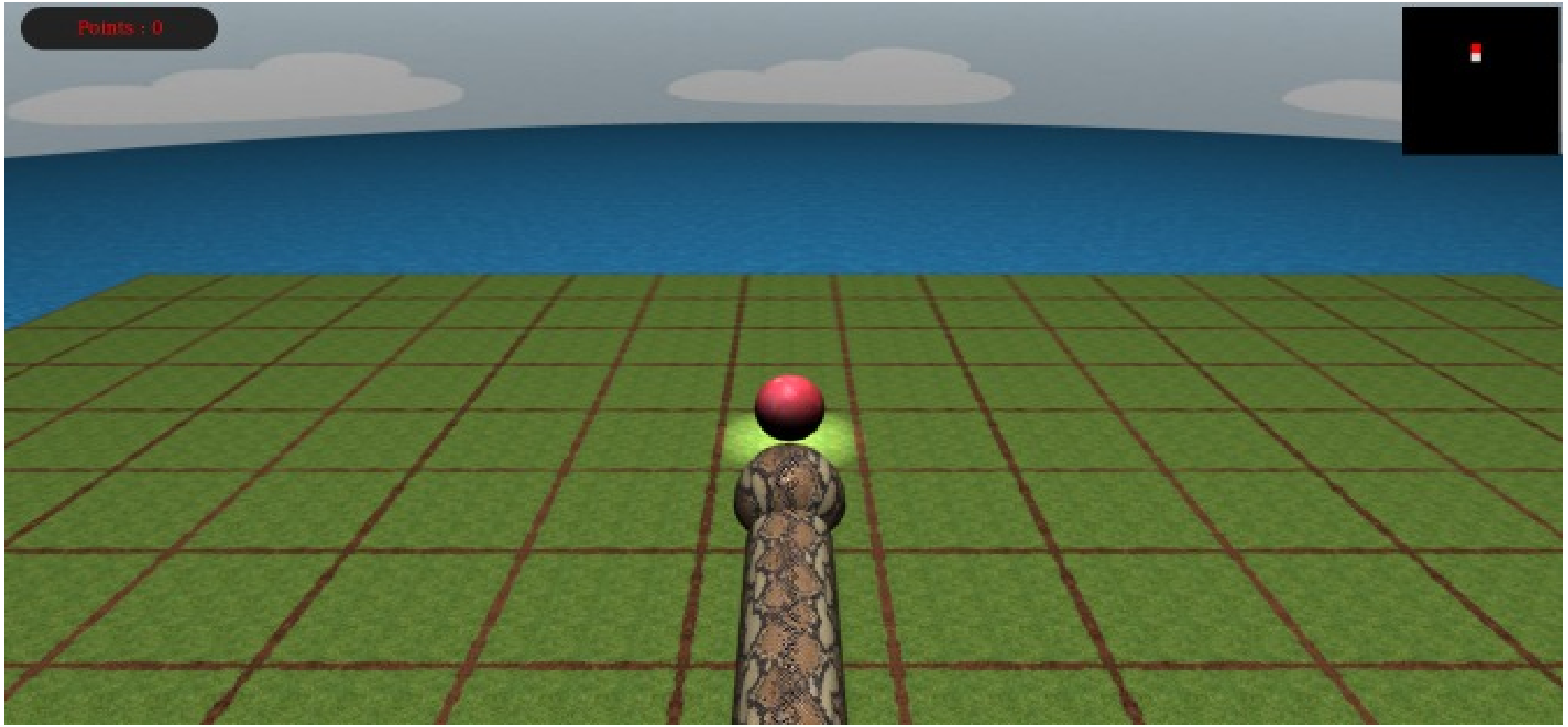
- Description of the environment
- Objects
- Lights
- Movement
- MiniMap and Points

# Description of the environment

- Only Basic WebGL – **NO LIBRARIES**
- Start Window – start.html
- Game Window – main.html

# start.html

# main.html



# Objects

**World**

A square divided in a grid of 16x16

The snake moves in the world

Each part of the snake is centered in the cell in which it is

# Objects

**Sea**

A square with a texture that has a sinusoidal movement to simulate the waves movement

**Sky**

A cylinder that contains a texture that is translated at each instant of time to simulate the movement of the clouds

**Bonus**

A Sphere that rotates around itself

# Objects

**Snake**

Hierarchical model

Head : ellipsoidal coordinates

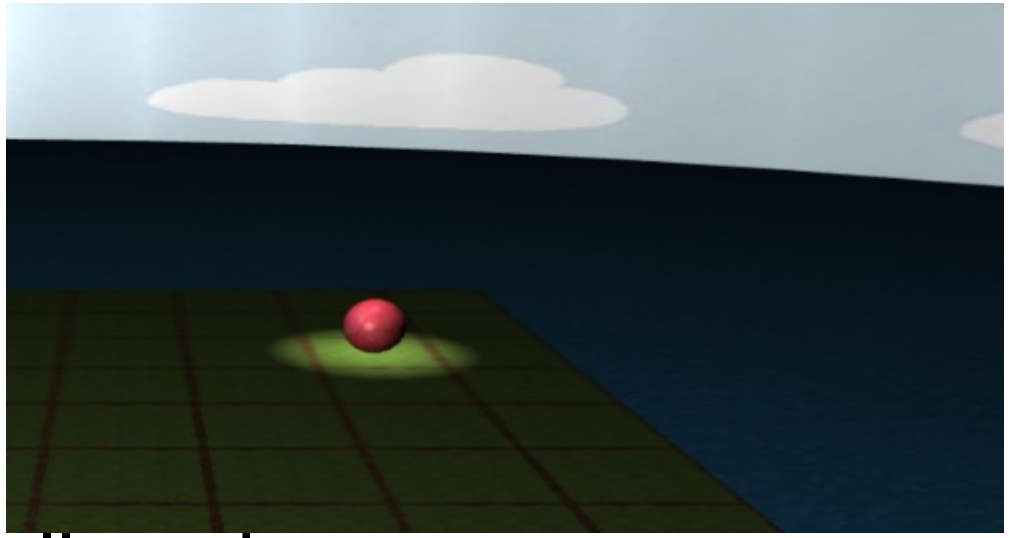
Body: cylindrical coordinates

Tail : ellipsoidal coordinates

Left Body and Right Body: toroidal coordinates

# Lights

Both Phong and Gouraud Model
We fix a distance to determine what model use
**Spotlight** on bonus



**Positional light** on all environment

# Movement

Left key to turn left
Right key to turn right
Space bar to pause the game

- Head and tail move
- The first and the last cylinders of the body appear and disappear with the movement of the slices
- When the snake turns we add the left or the right body depending on the direction

# Movement

# MiniMap and Points

**Minimap** to take trace of the bonus and of the snake position in the world
**Counter** for the points
**Points =200** → WIN
**Collision with itself or Go out the grid** → GAME OVER

SAPIENZA
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# THE END