

# FLAPPY Bird

Description: A 3D Flappy Bird game. (Three.js) ①

Objective: obtain the highest score by avoiding obstacles.

Game objects:

- main character: bird;
- obstacles: pipes or other obstacles;
- Scenario;
- UI = user interface

②

BIRO:

1) 3d object downloaded from the web

2) Bird's control: mouse and spacebar

OBSTACLES:

1) 3d model for the pipes (from the web)

2) Random positioning in the scene

3) Apparent movement implementation

SCENARIO:

1) Background with horizontal movement;

↳ cartoon style: not many details, "unreal", "pixels", "pixabay".

↳ generated images by IA(?);

↳ clouds, natural colours;

N.B.: Only this background, without a plane! i.e. the bird is flying;

2) Camera's settings:

↳ Slightly shifted from the centre axis;

↳ oscillatory movement simulating the flight.

↳ Look at the bird;

↳ Horizontal movement

3) Lights:

↳ Ambient light: uniform light for the entire scene;

↳ Directional light: simulating the sun's light → more realism;

↳ Other types (?)

User Interface:

- Score: visible on the screen; → constant update
- State managers: "Game Over", "Start".
- Buttons: start, stop, resume.

③

Audio:

- background music: cartoon style.
- sound effects: after cross the pipes.

④

Game Logic:

- Physics:

↳ birds  $\Leftrightarrow$  gravity and command response;

- Collisions

- Rules of the game: when is "game-over"?

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