

Game Design

Objective

This game focuses on the reflex based challenge and physical behavior. User controls a flying plane up and down to avoid the obstacles such as the rocks and flying mice. There is no level concept in this game, instead user will earn a point after successfully cross each obstacle, and the top score will be recorded.

Gameplay Mechanics

The game uses normal physics engine. In the game, there is a plane flying continuously with a constant speed, and user can touch the screen in order to make the plane fly higher. Otherwise, the plane will be falling down. By touching the screen or releasing, user can avoid the plane hitting on the obstacles. Once the plane hits an obstacle or falls onto the ground, the game is over.

At the beginning of this game, the obstacles will be placed loosely and easy for user to avoid. With the progress of the game, the space between the obstacles will become smaller and smaller, and the difference between the obstacles will become larger and larger.

Besides, user can control the plane to collect the coins in the air in order to earn some extra points. But collecting the coins will make the risk of hitting on the obstacles higher.

Level Design

There is no level concept in this game, and the difficulty will increase during the progress of this game by increasing density of obstacles and increasing difference between obstacles. After hitting on the obstacles, user should restart the game from the beginning.

Technical

Scenes

- Main Menu
- Gameplay

Controls/Input

- Touch based controls

- Tap to make the plane fly higher

Classes/CCBs

- Scenes
 - Main Menu
 - Gameplay
- Nodes/Sprites
 - Entity (abstract superclass)
 - Plane
 - WorldObject (abstract superclass)
 - Mouse
 - Coin

MVP Milestones

Week 1 (2/17 - 2/24/2015) - finishing a playable build

- Implement a playable version of game
 - Construct a simple gameplay scene
 - Add gravity to plane entity
 - Add plane movement
 - Scene moves according to the plane

Week 2 (2/25 - 3/3/2015)

- Add extra features
 - Add mouses and coins

Week 3 (3/4 - 3/17/2015) - finishing all the components

- Refine the scene
- Keep top score
- Pause and resume

Week 4 (3/18 - 3/24/2015)

- Refine the physics of the plane
- Find other needs of refinement

Week 5 (3/25 - 3/31/2015)

- Final refinement of the gameplay scene
- Final refinement of the physics

Week 6 (4/1 - 4/7/2015) - finishing the final version

- Integrate analytics
- Screenshots
- Write game description for App store
- Test by other people