



Technical Design Document

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1 LIST OF FEATURES CAPTURED FROM GDD

- Third person character view
- Game play characters: “Mario”, “Luigi”, “Wario”
- Audio and sound effects features
- HUD with built-in player score.

2 CHOICE OF GAME ENGINE

Reason for choosing the Cocos2d-x are the following:

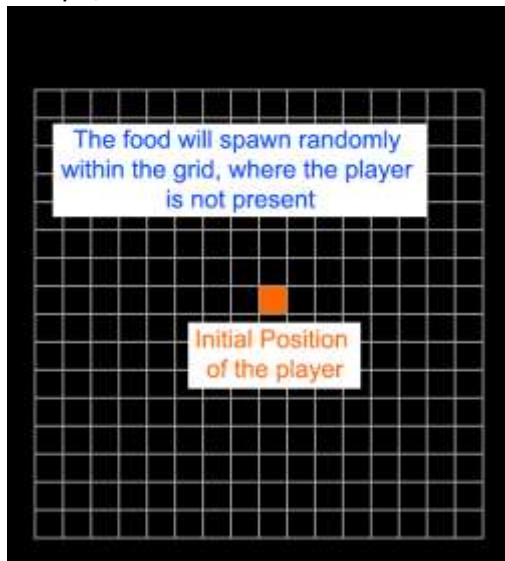
- Free to use.
- Required by the professor.

The following are the features of the Cocos2d-x which will be used in development of the game.

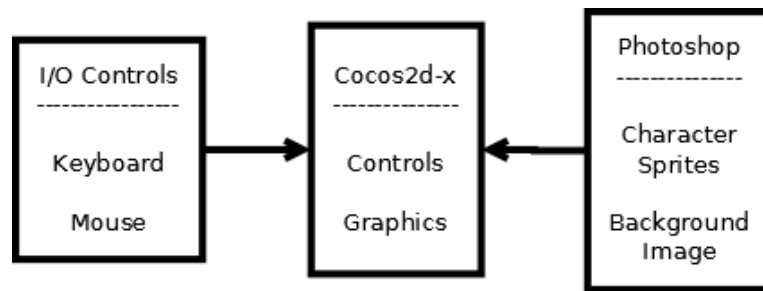
- Graphics and scene processing
- Audio features

4 DEVELOPMENT DIAGRAM

The player starts in the middle of the grid, initially is not moving. The player can choose from the directions up, left down, right. The player will then go one cell at a time to the direction chosen by the player, for every $\frac{8}{60}$ th of a second.

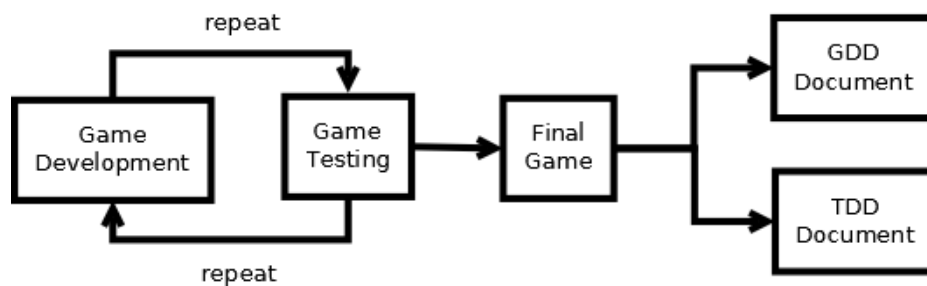


5 TECHNOLOGIES



6 DEVELOPMENT FLOW

Below is the development flow of the project.



7 ART TOOLS PIPELINE

7.1 Photoshop CS6

Photoshop is an image editing software created by Adobe.

Photoshop will be used to manipulate images to achieve the needed sprite image for the development of the game.

Features of Photoshop that is to be used:

- Modifying the colors of an image.
- Cropping of images.
- Saving image to file format PNG to retain the image's transparency.

8 ENVIRONMENT TECHNOLOGIES

8.1 2D Objects

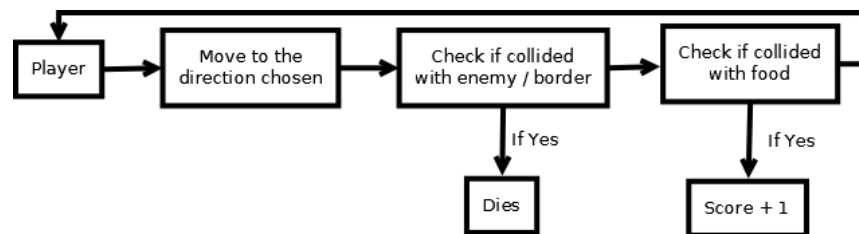
Player		
Object	Type	Tools Required
"Mario"	Static	Photoshop
"Luigi"	Static	Photoshop
"Wario"	Static	Photoshop
"Goomba"	Static	Photoshop
"1 up mushroom"	Static	Photoshop

8.2 Terrain

Background		
Object	Type	Tools Required
Background	Static	Photoshop

9 GAME LOGIC

Below is the flow of the game.



10 AUDIO AND VISUAL EFFECTS

10.1 Audio Effects

There will be sounds on starting the application, and the start of playing the game. Other sounds will be actioned for colliding with food, enemy, or border.

11 DELIVERY PLATFORM, HARDWARE / SOFTWARE REQUIREMENTS

The following are system requirements to play the game:

- Windows 7 or higher.
- 500 MB free hard drive space.

12 Important Notice

No copyright infringement intended. Solely for the purpose of the project, because the project has a grade for fancy GUI and sound effects.

12.1 References

- Mario, Luigi, Wario : <http://ashryanbeats.com/talks-and-demos/howlerjs/images/mario-jump.png>
- Sound Effects : <http://themushroomkingdom.net/wav.shtml>
- Background Image : <http://i.stack.imgur.com/WHu9Z.png>
- Font : <http://www.fontspace.com/jackster-productions/super-plumber-brothers>