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# DRAGON RUSH DESIGN DOCUMENT

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DECEMBER 10, 2020  
GAME PROGRAMMING 1  
VANIER COLLEGE, FALL 2020

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## I. Executive Summary:

Original game pitch: [game pitch](#)

Dragon Rush is a game made of many mini games; it was made to reminisce about games we played during our childhood, like Pac-Man, Snake and Mario. Each level was inspired by these games, where the goal is to get as many points as possible within the time frame specified.

The first level was inspired by Ms. Pac-Man, the second level was inspired by Sandwich Stacker and the third level was inspired by Mario and Dino Rush. All three levels have a specified time frame.

If the player's score falls under 0 before the timer runs out, it would be considered a fail and the game would restart (back to the menu screen).

Each level has its own instruction screen that can be skipped when the player presses any keyboard key and they would be displayed before each level. In addition, a menu screen containing a credits option, which will display the outside contributors of the game, a instructions option, which displays the overall instructions for the game and a play option, which starts the game.

At the end of the last level, the player would be rated according to how many points they acquired (the points are cumulative). The rate they got would correlate to their performance in each level. This skill percentage is calculated using the player's points and the total possible points. Moreover, since every game is generated randomly, the total amount of possible points would also change each time the play button is pressed.

**Concept: how good were you in your childhood games?**

## II. UI Mock-ups:

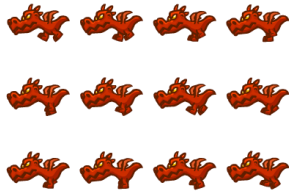
### THE DRAGON:

1. [Flying Dragon Rework](#):



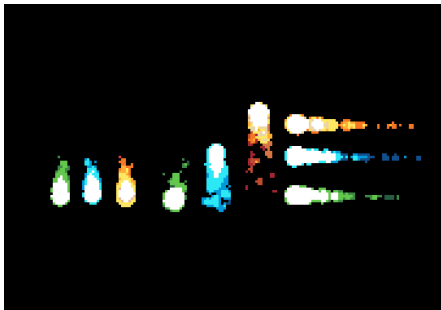
Dragon image from opengameart.org (creators: Jordan Irwin and ZaPaper, "Flying Dragon Rework" CC-BY v3).

2. [2D Fantasy Asset: Knight, Princess and Dragon by akylrum](#):



Dragon image from itch.io (creator: akylrum, io“Knight\_Princess\_and\_Dragon”, free 2d game sprites).

3. [Animated Fires by Stealthix](#):



Animated fire gif from itch.io (creator: Stealthix, “Animated Fires”, CC).

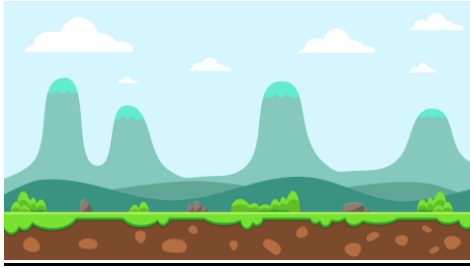
4. [Rocket burner animation](#) (red) & [comet graphic](#) (blue):



Fire images from gamedeveloperstudio.com (creator: Robert Brooks, “Rocket Burner Animation”, “Comet Graphic”, Robert Brooks’ license (permitted use))

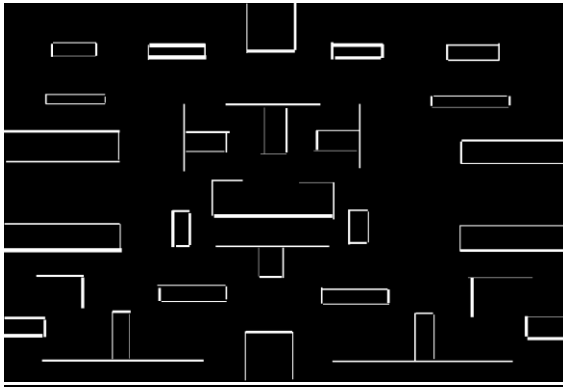
**THE WORLD** (different levels):

Mario/Dino Rush level (level 3): [Flat Nature](#):



Background image from itch.io (creator: MadFireOn, “Flat Nature”, CC).

Pac-Man level (level 1):



Background image made using GIMP (creator: Giuliana Bouzon, “Pac-Man Background”, CC).

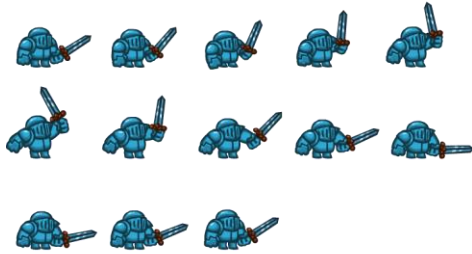
Snake level (level 2): [Tower Defense - Grass Background](#) + ground cropped from level 3 background



Background image from opengameart.org (creator: hassekf, “Tower Defense - Grass Background, CC).

## THE ENEMIES:

### 1. [Knight, Princess & Dragon](#):



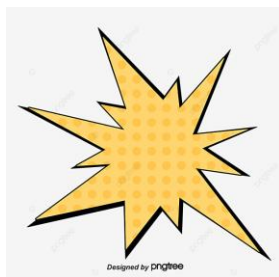
Knight images from itch.io (creator: akyllum, “Knight, Princess and Dragon”, permitted use).

### 2. [Bomb](#)



Bomb image from opengameart.org (creator: Carlos Alface, “Bomb Fun Sprite”, CC).

### 3. [Explosion](#)



Explosion from PngTree (<https://pngtree.com/so/graffiti>)>graffiti png from pngtree.com</a>)

## THE ALLIES:

### 1. [Coins graphics](#):



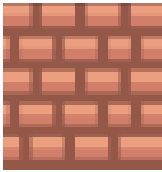
Coin images from gamedeveloperstudio.com (creator: Robert Brooks, “Coins Graphics”, Robert Brooks’ license (permitted use)).

2. [Fruit icons redo:](#)



Fruit images from gamedeveloperstudio.com (creator: Robert Brooks, “Fruit Icons Redo”, Robert Brooks’ license (permitted use)).

3. [Mini brick tiles](#)



Block image from opengameart.org (creator: Scofanogd, “Mini brick tiles”, CC).

## THE SCREENS:

1. [Arcade pack](#)



Arcade image from opengameart.org (creator: Xom Adept, “Arcade pack”, CC). Edited by Chelsea.

Game screens were all designed and created by Chelsea using this Arcade pack on Adobe After Effects.

Buttons were all designer and created by Chelsea using Adobe After Effects.

2. Menu Screen:

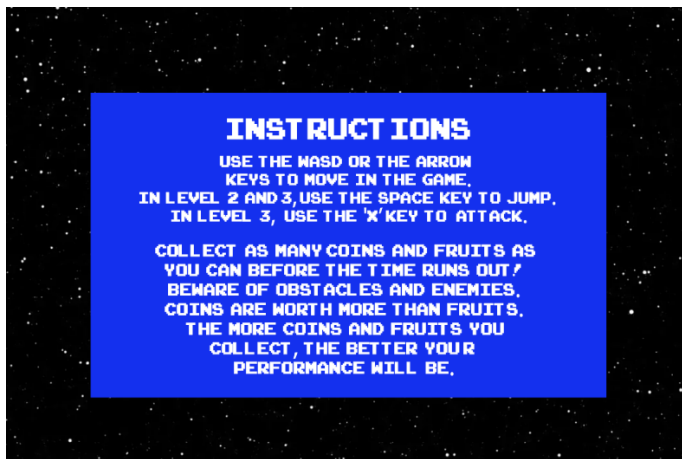


**CREDITS**  
**INSTRUCTIONS**  
**MENU**  
**PLAY**  
**RESTART**

3. Credits Screen:

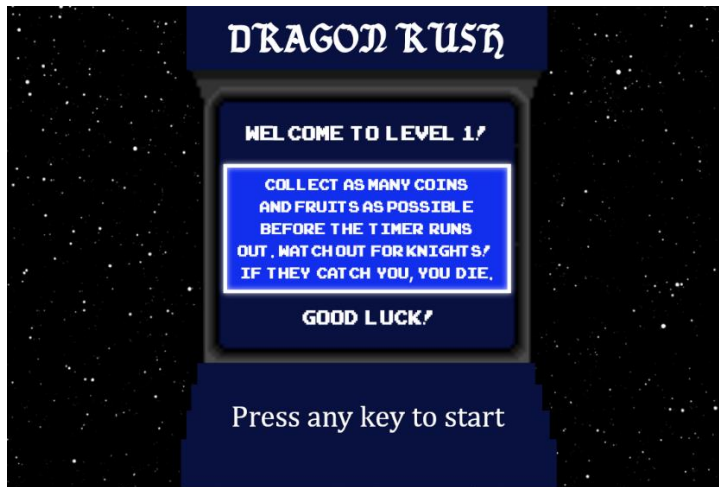


4. Instructions Screen:

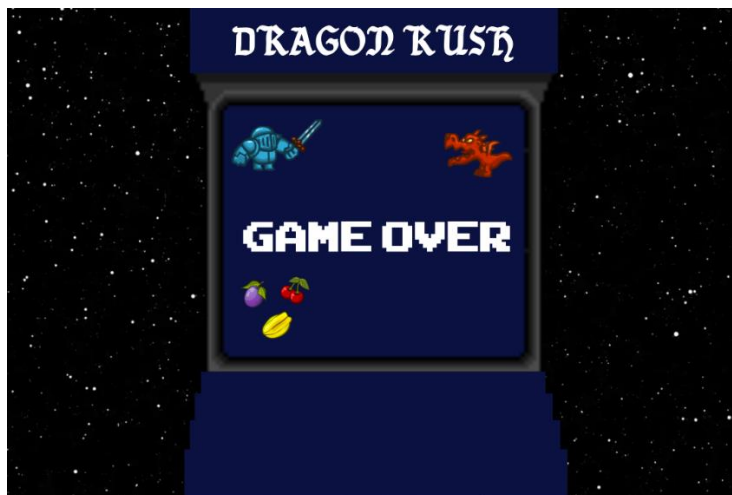




5. Transition Screens:



6. Game Over Screen:



### III. The Sounds:

1. [Eating v1](#) - Eating sound for fruits by HerraBilbo on freesound.org
2. [Coins 1](#) - Picking up coins sound by ProjectsU012 on freesound.org
3. [Shoot\\_01](#) - Hurt sound by LittleRobotSoundFactory on freesound.org
4. ["Fire.aif"](#) - Shooting fire sound by Gemmellness on freesound.org
5. [Bomb Sounds](#) - by Mike Koenig on soundbible.com
6. [Click2 Sounds](#) - by Sebastian on soundbible.com
7. [Jump](#) - by cabled\_mess on freesound.org
8. [Death Sound](#) - by harrietniamh on freesound.org
9. [Game Background](#) - background music by yummie on freesound.org
10. Game over song by Michael Kolling from WBC project in book scenarios

## IV. Controls:

“A” key → right (forward)

“D” key → left (backward)

“S” key → down

“W” key → up

“X” key → attack (fireballs)

“Space” key → jump, f

Mouse cursor → buttons

## V. Developer Roles:

- Designer & Programmer: Chelsea
- Project Manager & Programmer: Giuliana
- Programmer: Andrei

## VI. Responsibilities:

### PROTOTYPE:

**All:** update GitHub README (readme.md) whenever a new version of the game is pushed.

**Andrei:** editing images, doing game scoring and dragon images.

**Chelsea:** editing images (removed background and cropped), level design, designing the scrolling worlds and user control.

**Giuliana:** scale pictures to the world, build base for the different levels and actors, do eat() method and attack() methods as well as methods to generate allies randomly.

### FIRST PLAYABLE:

**Andrei:** work on level 2, define its functionalities & its characters & documentation.

**Chelsea:** work on level 1, define its functionalities & its characters & documentation.

**Giuliana:** work on level 3, define its functionalities & its characters. Make menu screen, make transition screens for each level & project documentation.

### PRE-ALPHA:

**Andrei:** postponed.

**Chelsea:** Improving level 1, creating game screens.

**Giuliana:** improve game functionalities and edit characters' hitbox & documentation.

## **ALPHA:**

**Andrei:** improve level 2.

**Chelsea:** edit screens, improve level 1.

**Giuliana:** improve game functionalities, level 3 & documentation.

## **GOLDEN MASTER:**

**Andrei:** Finish functionalities for release.

**Chelsea:** Update screens and finish functionalities for release.

**Giuliana:** code review, refactorization, debugging & documentation.

## **VII. Schedule of Releases:**

### **11/17, PROTOTYPE:**

- Complete the basics of all the levels of the game.
- Design a basic look for the world and the characters.

### **11/22, FIRST PLAYABLE:**

- Different levels of the game are enhanced and further developed.
- The look of the characters have been developed and updated from their initial state.
- Design of the powerups have been created.
- Debugging (if needed) and code review.

### **11/29, PRE-ALPHA:**

- Level and world development are done.
- The look of the characters are almost done being developed.
- Overall game mechanics updated and enhanced.
- Debugging (if needed) and code review.

### **12/06, ALPHA:**

- All levels are almost completely developed to the user-friendly standard (they are being tweaked).
- Overall game design completed (characters, world, allies, etc).
- Any final debugging (if needed) and code review (final efficiency test).
- Finish all documentation and update license files.

**12/10, GOLDEN MASTER:**

- All levels are completed and ready for a user-friendly experience in every way.
- Final update for game documentation.
- Code review & fixing bugs

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