Dragon Attack

Game design document

GAM150S18

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Team D-Sync

|  |  |  |
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# **High Concept**

Dragon Attack is a single-player 2D action platformer set in a medieval fantasy environment.



# **Summary**

Dragon Attack is a **2D action platformer** where the player plays as a young dragon attacking a castle to gain its treasures. The objective of the game is to defeat the King of the castle and gain his treasures.

# **Story**

A screenshot of a cell phone

Description generated with very high confidenceIn a fantasy realm, a young dragon named Bob has been constantly belittled for his extremely underwhelming name. So, he sets out to conquer the castle of the most famous king of the realm, King Arthur and steal his treasures and in doing so, prove himself.

Figure 1 Overall Game Loop

# **Game Flow**

## Title screen

This will include the DigiPen logo and the team logo and the game’s title.

## Main Menu

The main menu will include How To Play, Play, Options, Quit Game, Credits

## Stage Selection

The stage selection screen will allow players to select from up to 9 sub-stages, with 3 main stages split into 3 sub-stages each.

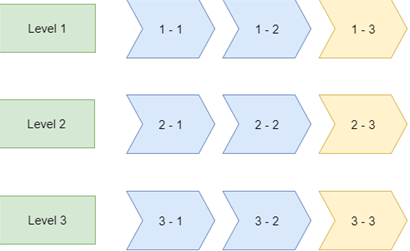


Figure 2 Stage structure of our game

As seen in the picture above, the game is split into 3 main stages. The blue sub-stages represent normal stages, the yellow sub-stages represents a boss fight.

# **Gameplay**

The player only has a basic ‘Fire Ball’ attack. The player will need to use it and the platforms in the environment to overcome enemies and bosses. The quantity of enemies will slowly increase, and difficulty will gradually increase as well until it hits a difficulty ceiling.

## Difficulty Curve

Enemies

Enemies will gradually increase in quantity and variety as the game progresses. Enemies will be coming at the player from the right side of the screen. However, there will be some who have ranged abilities and are stationed on platforms above the player. Different enemies require different methods of dealing with them.

Pickups

Power-Ups and Healing Items can be found throughout the game. These Power-Ups gives the player improvements like Increased Damage, Increased Movement Speed or Invulnerability. There are also coins and health pickups laid throughout the map.

Boss Battles

There are Stage Bosses at the end of the stage. The Stage Boss will have unique skills to him and will have different phases. The Stage Boss will test the player’s skill with the mechanics.

## Scoring

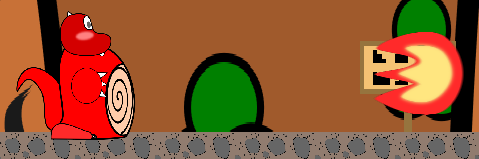
At the end of each stage, players will be able to see their total score they’ve gained. Scores are calculated by the enemies you kill and the coins you collect.

# **Game Mechanics**

## Character Movement

The character can move left, move right and jump.

## Character Attack



The player character will have a basic attack, a ranged fireball attack and a charged ‘Mega Fireball’ attack that only becomes available when the player fills up a meter by landing 10 successful hits. It is a high damage attack that will reset the meter after use.

## Win Conditions

Main Objective – Defeat King Arthur.

Sub Objectives – Clear stages and defeat bosses.

## Lose Conditions

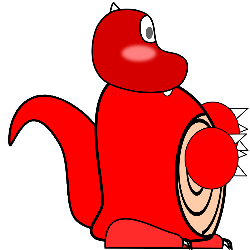
When the player’s health reaches zero, the player loses and the stage restarts.

## Scoring System

Score is based on coins and the enemies you defeat.

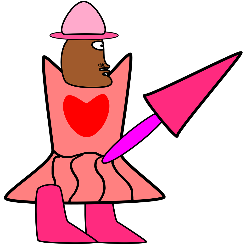
# **Game Characters**

## Player Character / Bob



Bob is a dragon. Bob’s name is too underwhelming, in terms of dragon culture. He has no treasures to lord over and is constantly being looked down upon by other dragons.

## Lancelot



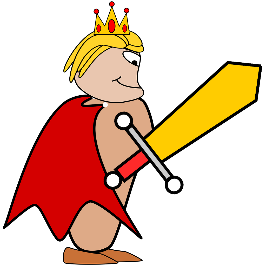
Lancelot is a cross-dressing knight under the service of King Arthur. Despite his quirks, he is well-known as King Arthur’s right hand man, defending the kingdom with his trusty lance Arondight.

## Merlin



Merlin is the crazy arch wizard of King Arthur’s kingdom. He is a few hundred years old and knows a variety of dangerous magic spells.

## King Arthur



King Arthur is the strongest human in the human realm and the King of the castle that Bob attacks. He owns a huge amount of wealth and treasures.

# 

# **Game Resources**

## Enemies

|  |  |
| --- | --- |
| ILLUSTRATIONS | DESCRIPTION |
| C:\Users\william.yoong\Desktop\drqst\Production\Illustrations\Grunt\Grunt.png | Soldiers   * Normal moving speed, attack, low health points. |
| **C:\Users\william.yoong\Desktop\drqst\Production\Illustrations\Grunt\Archer.png** | Archers   * Slow moving speed, long range attacks, normal health points. |
| C:\Users\william.yoong\Desktop\drqst\Production\Illustrations\Knight\Knight.png | Knights   * Slow moving speed, fast attack, high health points |
| C:\Users\william.yoong\Desktop\drqst\Production\Illustrations\Mage\Mage.png | Mages   * Ability to teleport short distances, long ranged attack, low health points. |

## Power-ups

|  |  |
| --- | --- |
| Power-Ups | Descriptions |
| C:\Users\william.yoong\Desktop\drqst\Production\DragonAttack\DragonAttack\Textures\spd.png | Speed Up (Common) – Increased movement speed. |
| C:\Users\william.yoong\Desktop\drqst\Production\DragonAttack\DragonAttack\Textures\invul.png | Shield Bubble (Rare) – Makes the player invulnerable for some time. |
| C:\Users\william.yoong\Desktop\drqst\Production\DragonAttack\DragonAttack\Textures\Fireball.png | Attack Up (Rare) – Increased attack for some time. |
| C:\Users\william.yoong\Desktop\drqst\Production\DragonAttack\DragonAttack\Textures\hp.png | Heart (Common) – Increase the player HP by 1 |
| C:\Users\william.yoong\Desktop\drqst\Production\DragonAttack\DragonAttack\Textures\coin.png | Coin(Common) – Increase the player score that will be calculated at the end of the stage |

## Bosses and Abilities

|  |  |  |  |
| --- | --- | --- | --- |
| **Boss Phases** | **Stage 1 Boss : Lancelot** | **Stage 2 Boss : Merlin** | **Stage 3 Boss : King Arthur** |
| Default | Slash / Stab | Blink | Single Slash wave / Triple Slash wave |
| Phase 1 | Mad Enhancement | Energy Ball | Dash Attack |
| Phase 2 | Arondight | Arrow Rain | Regeneration and Call Allies |
| Phase 3 |  |  | Homing swords |

## Platforms

There will be platforms present in normal stages to facilitate in player movement and platforms in boss fights to allow the player to dodge attacks and plan their next move.

# **Game Environment**

Dragon Attack will feature 3 main stage with different themes. Each stage will introduce new enemies and different mechanics and behaviours.

## Courtyard / Outdoors

This stage will feature outdoor areas that the player will have to fight through to reach the gates. These areas will generally feature weaker enemies to serve as a tutorial for the player to learn the controls. As the player reaches the end, the environment will change to feature more castle-like environments. These areas will feature enemies like soldiers and archers.

The final boss of this stage will be Lancelot, the cross-dressing knight.

## Grand Library

This stage will feature castle interiors which the player moves through to get to the throne room. The enemies in these areas will include soldiers, archers and mages, which will appear as a new ranged enemy type.

The final boss of this stage will be the crazy arch wizard ‘Merlin’.

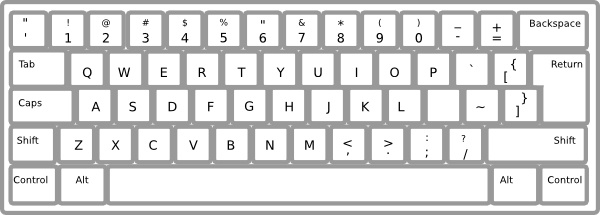
## Throne Room

This stage will feature castle interiors as players make their way toward the throne room. The enemies in these areas will include all the enemy types featured previously as well as the knights. This serves to challenge the player and test their understanding of the mechanics and controls.

The final boss will be King Arthur.

# **Game Controls**

## Keyboard



**Movement:**

A - Move left

D - Move right

SPACEBAR – Jump

**Combat:**

ENTER – Fireball

Shift – Mega Fireball (only when meter is filled)

# **Visual Design**

## Art style

Dragon Attack aims to go for a cartoonish art style.

## Camera Position

Camera will follow character.

Camera will be fixed for stages with boss fights.

# **Audio Design**

## Audio Style

Fantasy folk music, with comedic elements and dramatic music for boss fights.

# **Behaviour Design**

## Enemy AI

All enemies’ line of sight will be determined by their own line of sight.

### Basic Types

Basic melee enemies like the soldiers will have a basic movement pattern. Only once the player comes within a specific range will they move toward and damage the player.

Basic ranged enemies like the archers will have a stationary position. Once the player comes within a specific range, they will start firing toward the player. If the player moves too far, they will slowly chase after the player.

### Advanced Types

Advanced melee enemies like knights will move slowly toward the player and try to attack them with a fast stab attack.

Advanced ranged enemies like mages will have a stationary position and fire magic orbs at the player. After taking damage, they will teleport to another spot near the player.

### Bosses

Each boss fight will have their own phases. They will have basic attacks and a unique move in each phase. Their phases will change as their health drops pass certain thresholds.

**Lancelot** will only have melee attacks as it is the first boss. He has two default attacks which are slash and stab.

In phase 1, its attacks include mad enhancement, which cause Lancelot to move faster and have no idling time.  
In phase 2, Lancelot switches from mad enhancement to Arondight, where he shoots his lance to the sky and bring it down, covering either half of the left side or ride side of the screen.

**Merlin** will have a set of ranged attacks and a basic melee attack that he will only use if the player is nearby. He would also be able to blink throughout the fight and do so every few moves.

In phase 1, his ranged attacks will consist of a single-shot energy ball and spread-shot energy ball.

In phase 2, Merlin would employ his remaining magical energy and start using his ultimate move – arrow rain. A magic circle would appear in the sky and shower down arrows on his enemies.

**King Arthur** will have a basic attack that employs his magical sword that deals physical damage and fires magical projectiles.

In phase 1, he can slash and triple slash. Slashes can be avoided with one jump. Triple slashes can’t be avoided with one jump – the player must jump on a platform to avoid it. He will also dash towards the players.

In phase 2, he will attempt to regenerate health by teleporting away onto a platform and spawning enemies to attack the player.

In phase 3, he will fly into the air and summon 4 homing swords against the player.

# **Physics Design**

## Physics

### Pseudo Gravity

Pseudo gravity will be simulated in the game to facilitate the jumping dynamics for the platform elements and it will also affect in-game projectiles like arrows, causing it to curve downwards and have an entropy effect.

### Collision

All game objects would have a collision factor that would run through the collision engine to detect collisions. When the player is damaged by any collision, they will be pushed back slightly and given invulnerability for a split second.