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| HALT gAMES PRESENTS |
| Blizzard the Wizzard |
| Game Design Document |
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| **Hamish Carrier, Arran Ford, Liam Doherty, Timothy Veletta** |
| **Version 0.03** |

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# Document History

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| Version | **Date** | **Changes** |
| 0.03 | 02/10/12 | Added:   * Mockups – User Interface * Physics – Collision Detection * Physics – Vector Motion * Music and Sound Effects * Artificial Intelligence – State Transition Tables   Modified:   * Characters – The Bad Dudes * Game Objects – Tomes * Game Objects – Scrolls * Gameplay Elements |
| 0.02 | 27/09/12 | Added:   * Artificial Intelligence * Art and Cutscenes * Physics * Music and Sound Effects * Controls   Modified:   * Game Overview * Gameplay * Characters   Game Objects |
| 0.01 | 26/09/12 | Added:   * Game Overview * Gameplay * Characters * Game Objects |
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# Game Overview

Blizzard the Wizzard is a 2nd person, top down survival combat game where the player plays as Blizzard, a gangster wizard trying to join the Gang of Wizards. But to do this he must pass his initiation test, to take the magic portal onto a remote island and take on its deadly inhabitants, trying to survive for as long as possible while searching for the ancient scrolls and tomes to increase his power.

# Gameplay

The player will control the character 'Blizzard', a gangster wizard trying to enter the Gang Of Wizzards (intentionally misspelt), the highest level of prestige a gangster wizard can reach. To prove his worth Blizzard must travel to a magical island filled with ancient artefacts, and vicious villains.

The player will play from a 2nd person view, from the top down and using the 'WASD' keys they will be able to move Blizzard around the island. As Blizzard moves the camera will move with him, keeping him centred at all times.

The player begins with one default spell to combat his enemies with and as the game progresses the player will collect power ups that will either give him permanent or temporary increases in power in the form of new spells. Using the mouse to aim the player will use these spells to combat the monsters that dwell on the island.

The monsters will come in waves and use either ranged or melee attacks to try and kill the player. After each wave is defeated a more powerful one will follow until eventually the player is overcome.

The player will then be informed on whether he has made it into the gang based on his or her performance.

The game aims to be fast paced with a steady increase in pace and difficulty. The player must also make tactical decisions on when to cast what spells as each spell has an associated cooldown and spell power cost, meaning using a powerful spell too early may lead to the character being killed while he or she is unable to cast it again.

## Controls

Since the camera view is top down, the player is restricted to moving and aiming along the XZ plane.

# Characters

**W**

**S**

**A**

**D**

**Q**

**E**



**Player Movement**

W - Up

A - Left

S - Down

D -Right

Q – Area of Effect Spell

E – Heal/Shield Spell

Mouse Movement – Aim

Left Mouse Button – Default Spell

Right Mouse Button – Damage Spell

## Blizzard

The hero of the game Blizzard is your everyday Gangster Wizard featuring a combination of Gangster gibes and mad magics, Blizzard aims to prove his worth against the deadly denizens of the Mystical Island and take his rightful place in the Gang Of Wizards.

To start out Blizzard can only cast a standard spell which does damage to his enemies however his power can be augmented through the addition of further abilities learnt through acquiring Tomes dropped by fallen enemies.

## The Bad Dudes

Due to long exposure to the powerful magic contained on the Mystical Islandthe originally tame and normal creatures that inhabited the island have grown in size, power and intelligence, addicted to the magic that has made them strong they are also viciously protective of the artifacts on the island and will attack all who step foot on it with neither hesitation nor mercy.

These powerful beasts include:

* Bad-Ass Birds
  + Fly directly at Blizzard trying to hit him to deal damage.
* Funk Fish
  + Blasting Beholders, fly past firing balls of energy at the player
* Khronic Krabs
  + Move sideways with guns instead of claws, try to shoot Blizzard when in range but also try to flee from him.
* Interior Crocodile Alligator
  + Reference: <http://youtu.be/kZwhNFOn4ik>
  + Slow moving, deals high damage and takes a lot to kill.

# Game Objects

There are two types of objects that the player can interact with, they are Tomes and Scrolls.

## Tomes

Tomes offer upgrades to Blizzards spell power and are equipped as long as they are not replaced by another spell of the same type. Tomes spawn at one of the designated spawn points at certain points in time, the spell learnt from a tome is randomised.

There are 3 types of spells:

1. Area of Effect Spells (AoE)
   * These spells deal damage in an area around Blizzard
   * Some examples of AoE spells are:
     + 8 Ball – Blizzard summons 8 projectiles that project in the 8 directions of the compass around him.
     + Hells Angels – Blizzard summons Hells Angels in the area around him stunning all enemies within the radius.
2. Buff Spells
   * These spells buff Blizzard, either by healing or shielding him or increasing his spell power or mana
   * Some examples of Buff spells are:
     + West Shi-eld – Summons a shield around Blizzard which shields him from all damage for 5 seconds.
     + Regener8 – Heals Blizzard for x HP.
3. Damage Spells
   * These spells are fully focused on damaging enemies and can be aimed in a particular direction
   * Some examples of Damage spells are:
     + Bloods Revenge – Fires a bolt of energy in a line dealing a large amount of damage to all units it hits.
     + Crips Strike – Fires a bolt of energy in a line stunning and damaging all units it hits.
     + Brother Slow – Fires 3 bolts of energy, dealing damage and slowing all units they hit.

## Scrolls

Scrolls give Blizzard temporary buffs, only lasting for a short period of time. Scrolls have a chance be dropped by enemies when they are killed. Some examples include:

* Yellow Scroll - Speed Boost
* Green Scroll - Increased Damage
* Red Scroll - Instant Health
* Blue Scroll - Instant Mana

# Physics

## Collision Detection

Collision Detection will be used in:

* Detecting the players Y coordinate on the terrain given their X and Z coordinates due to terrain of varying heights.
* Detecting if projectiles hit the player.
* Detecting if projectiles hit enemies.
* Detecting if players and enemies collide.

## Vector Motion

Vector Motion will be used in:

* Spell effects – to work out where the spell outputs should be at all points in time.
* Artificial Intelligence – to work out what moves to make, the shortest distance to the player etc.

# Artificial Intelligence

Artificial Intelligence is only really necessary in the enemy characters. It will be implemented through the use of Finite State Machines.

The AI will consist of four objects, these objects will inherit properties from a parent object that holds functions and variables that all AI creatures will require. Each of the AI will use behaviour states to dictate their movements and attacks. These states use the singleton design pattern so only one instance exists for each and can be used by any AI object that requires it, the variables the states rely on will be stored in the AI objects.

# Mockups

Simple designs of every screen the user will see. Explanations of what the screen does and what different actions will do on different screens

## D:\Users\Timothy Veletta\Downloads\GameUI.pngUser Interface

This is the main play screen. Information the player can get from this interface is:

* Their current health on the red bar.
* Their current mana on the blue bar.
* Their spells and their cooldowns on the icons above the health and mana as well as what keys to press to cast those spells.
* The scrolls currently affecting the player as shown on the right hand side.
* The players current wave and overall score.

# Art and Cutscenes

## Terrain

* Island model
* Water – using wave plane
* Skybox

## Gameplay Elements

* Blizzard
* Enemies
  + Badass Birds
  + Khronic Krabs
  + Funk Fish
  + Interior Crocodile Alligator
* Scrolls
  + Use the same model, but recolor for different Scroll effects.
* Tomes
  + The tome will have the same model for each spell however the image on the cover will be the image used to distinguish the spell.
* Spell Effects
  + 8 Ball
  + Hells Angels
  + West Shi-eld
  + Regener8
  + Bloods Revenge
  + Crips Strike
  + Brother Slow

# Artistic Goals

The art style should have a non-realistic, cartoon-y feel to it where key features such as spell effects and damage are greatly emphasised.

# Music and Sound Effects

The music and sound effect style is non-realistic and should greatly emphasise the damage done by spell effects.

The music and sound effects required are:

* Ambient/Background Music
* Spell Sound Effects
* Collecting Tomes and Scrolls
* Enemy Sounds

# Story

The story of Blizzard the Wizzard begins on Blizzards 480th birthday, an age within the wizard community that signifies a coming of age. This means the Blizzard must join a gang, the most prestigious being the Gang of Wizzards. For his initiation challenge he must travel to a remove island in the sky and defeat its inhabitants. If he does well enough he will be successful in his quest to join the Gang of Wizzards.

# Level Design

There is a single level in the game which is an island in the sky where the player gets sent as their initiation test to get into the League of Wizzards. The player cannot fall off the island and enemies constantly spawn at random points around the island. When the player kills enemies they have a random chance to drop either scrolls or tomes which augment Blizzards power.