Chroma Shift

Revision: 1.0.0

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# Overview

## Elevator Pitch

Chroma Shift is a fast paced 2D side scroller where the objective is to reach the end and eliminate any enemies trying to stop you on the way.

## Theme / Genre

* Sidescroller
* Beat em’ up(esque)
* Platformer
* Fast paced (Time based)

## Mechanics

* Run (Left or Right)
* Jump
* Attack
* Block

## Targeted Platforms

* PC
* Xbox One
* Playstation 4
* Mobile ?

# Project Scope

## Game Time Scale

This game will be completed (or at least a prototype will be finished) in a 4 month period.

## Team Size

Core Team: Core team consists of Mat Becker and Dan Argento

Mat Becker - Programmer, Artist and Music Producer. Mat will handle lots of the programming and designing of Chroma Shift. He will also be doing a fair bit of the art and the music / sound effects for the game.

Dan Argento - Programmer. Dan will focus heavily on programing different aspects of the game, and help out with Art and Music when needed. He will also attempt to program shaders that will be utilised throughout the game.

# Influences

## MegaManX (SNES)

Similar to MegaManX, our game will not feature a tutorial level or tell the user how to play the game. We will utilise proper game design to create the first level, where the player’s only hope of completing the stage is to become familiar with the game’s base mechanics. An example of this is at the beginning of the first stage the player will only have the option to move to the right, very clearly indicating the only way to progress through the stage is by walking towards the right side of the screen.

## Ninja Gaiden (NES)

The original Ninja Gaiden was a 2D side scrolling, beat em up platformer that challenged the player to traverse levels filled with difficult platforming sections and tough enemies. Chroma-Shift will inherit some of the main features found in this style of game, but will introduce new features of its own.

## Hotline Miami (PC)

Chroma-Shift will play similarly to Hotline Miami. It will feature very fast paced gameplay that will challenge the player to either kill or be killed. With everything dying in one or a few hits, the player must demonstrate a combination of quick reflexes and a deep understanding of the game mechanically in order to succeed.

# Project Description

Chroma Shift is a 2D side scrolling beat ‘em up platformer. The objective is to get to the end of each level by travelling right as fast as possible. Along the way the hero(s) will encounter many enemies of all different kinds and they will have to clear through all of them to ensure they don’t die on the way. Chroma Shift can be played solo or you can play with up to 3 friends both local and online. The player will get to choose from 4 heroes. One with a strong medium ranged attack, one with a weak short ranged attack, one with a projectile long ranged attack and one with a magic attack.

When choosing a hero the player will also assign a color to their hero. They will choose from red, blue, yellow, green, orange and purple. The color you choose will affect gameplay drastically. Enemies will swarm at you in groups of colors and the damage they do to the heroes and the damage the heroes do to the enemies depends on the colors of each. Heroes that are same color as the enemies swarming them will do mass amounts of damage to the enemies while the enemies will do barely any damage to the hero, but the effects are reversed if the player comes into contact with enemies that are the complementary color of the hero. For example, the blue hero will destroy the blue enemies but orange enemies will destroy the blue hero.

Playing with friends will be more beneficial as you would take turns fending off different enemies if you chose a different color than your friend(s). To keep this mechanic more interesting each swarm or few swarms of enemies killed a shift in color will occur. The color shift will occur in both the game world and the enemy type since the color of the world will solely depend on which enemies are currently being spawned. When a group of enemies is killed the shader will redraw the world in a different color and as well as the enemies color changing their stats will also be rerolled. Things like their movement patterns, speed, damage and defense will all be variables that could change.

The heroes will also have to be quick as they are on a timer to get to the end of each level. If they fail to make it to the end in time they will have to restart the current level. The faster they complete a level will also affect their score for each level. Their score won’t solely depend on completion time, but it will have a lot to do with it. Chroma Shift will also feature power ups that the player can go looking for if they wish to greater increase their stats. The art style of this game will be pixel art and minimalistic. The shader work and colorfulness of Chroma Shift will be what really makes it vibrant and visually appealing. The art style will very much contribute to the fast paced feeling of our game.

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# Mechanics / Features

Jump - The player can jump. The force of their jump will depend on the character they have chosen. One character may even have a double jump, but this is undecided at this point. Jump will be binded to the “Space” key.

Run - The player can run left and right. When they start running their velocity will increase until they hit their max velocity. When the player lets go of the running key their velocity will decrease until they come to a complete stop. Again, their acceleration and max velocity will depend on the character. Movement will be bound to Unity’s “Horizontal Axis” keys.

Block - The player can block an incoming attack. They will have a shield that breaks when it is struck too many times but will recharge while not using it or if it is broken. If the player’s shield is depleted it will take a longer period of time to recharge so it’s suggested to avoid this. Block will be bound to an unknown key at this point.

Attack - The player can attack. The range, speed and power of their attack will depend on the character chosen. The power of their attack will also depend on which color they choose compared to which color the enemies are. Attack key will be bound to an unknown key at this moment.

Power Ups - The player can pick up available power ups that will grant them powers and bonuses to help them beat the level. These will include things such as: more health, invincibility, better attacks, better blocking etc...

# Story and Gameplay

## Story

The world is in great danger. The evil colorful enemies have invaded earth and will stop at nothing to destroy it. The fate of the universe is in the hands of the heroes. They must work together and fight for what is theirs

## Gameplay

Gameplay will take place over a series of levels. Each level will start at the left most point and players will ultimately have to run as fast as they can to the right most part of the level. Each level has to be completed within a time limit. If the heroes fail to complete the level on time they will have to start over. Swarms of enemies will constantly be spawning and will slow the heroes down because the heroes will have to destroy them before they themselves are killed by the enemies. Levels will get more intricate and will feature more enemies as heroes progress through the game. At the end of each level there will be a boss the players will have to kill to finish and move on to the next area.

# Assets

## 2D Characters

The Wizard - Does not have a weapon. The Wizard uses various magic spells in combat and can hover for a short period of time. The wizard casts a spell for his shield and it spawns an invincibility bubbles around him for a few seconds. Other heroes can hide inside the bubble as well.

The Swordsmen - Has a very powerful sword. His sword is dual-wielded and when it hits the ground it does a short area-of-effect attack killing enemies in its radius. The Swordsmen is the slowest but has the strongest attack. He uses his sword to block as well. If he lets his sword break while blocking he will be without a weapon until it recharges.

The Archer - Has a bow and arrow. He shoots in an arc and can adjust line which his arrows fire in. He is best to stay behind and fire into the crowd as he has the weakest defence of all the heroes. He has an average shield and can jump the highest.

The Ninja - Has 2 daggers. The ninja has the fastest attack and the fastest movement. However, his attack power and defense are kinda weak. His block is in invisibility for a few seconds but he will not be visible to both the players and the enemies so it comes at a cost. The Ninja is the only character that has a double jump.

## Environments

Environments will be built with a foreground (The area on which the heroes can actually walk on) a middle ground (non walkable areas behind the player that will parallax at a slower speed to give a sense of depth) and a background (non walkable areas really far behind that will parallax at an even slower speed). Given the minimalistic style of this game the assets in the levels won't be composed of much but outlines of objects separated by pretty and shaded colors. Yum.

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# Sound

## SoundList (Hero)

* Running
* Attacking
* Blocking
* On Hit
* Dying

## SoundList (Enemy)

* Attacking
* Dying
* On Hit

## SongList

* Level 1 Song
* Level 2 Song
* Level 3 Song
* Level 4 Song
* Level 5 Song
* Main Menu Song

# Code

Base Hero Class - will act as the base class for each hero

Wizard Class - class for the Wizard

Swordsmen Class - class for the Swordsmen

Archer Class - class for the archer

Ninja Class - class for the ninja

InputManager Class - Input observer for all input events in the game

SoundManager Class - Observer for all sounds and songs to be player in the game

LevelManager Class - class that will handle all the level switching data and will hold the information needed to persist between levels

Enemy Base Class - will act as the base class for all enemies

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# Animation

## Hero

* Idle Animation
* Run Animation
* Block Animation
* Attack Animation
* Death Animation

## Enemy

* Run Animation
* Attack Animation
* Death Animation

## Environment

Background animations will most likely be based on sin and cos waves. Shaders are currently planned to be the main focal point of the environment. There will be shaders for multiple different color palettes that the world colors will be based on.

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