

# NEON RUN

## GDD and Project Report

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Philip Bourke of SETU for guidance and help in the creation of this project

SETU for the opportunity to show my project and represent the college

Julianna Rowan for providing art assets to the game.

## Project Introduction

This game is an endless Runner, set in a neon city in which the player plays as a futuristic Chibi like character, their goal is to progress through the map, collect weapons and health packs and defeat enemies.

## Background

The background follows the theme of the game and features city buildings with a neon twist to them. We can notice the numerous details and layers put into it, which give the player a feeling of depth.

## Game Overview

### Common Questions

What is the game?

The game is an endless runner focused on running as far as you can and defeating the evil enemies that have taken over your city.

Why create this game?

We wanted to advance our knowledge of programming and asset creation while designing a game to add to our portfolios. Julianna wanted to learn to use spine animation for custom characters and Anass has a love for endless runner games and wanted to expand his knowledge of SFML

Where does the game take place?

The game takes place in a fictional futuristic Cyber Punk- esque city that has been taken over by an evil gang

What do I control?

You are in charge of a resistance fighter that is trying to save her city.

What is the main focus?

The player should run as far as possible and defeat as many enemies as possible while avoiding their attempts to stop you in your tracks. Run as far as you can!

What's different?

This game differs from traditional endless runners by utilizing a new theme and creating challenging and fun gameplay.

## Feature Set

### *General Features*

Platformer logic

Cyber Punk Art set

Lighting

32-bit color

### *Gameplay*

List stuff here that is key to the gameplay experience

List a lot of stuff here

Hey, if you got nothing here, is this game worth doing? //WRITE GAMEPLAY

## The Game World

### *Overview*

Provide an overview to the game world.

### World Feature #1

This section is not supposed to be called world feature #1 but is supposed to be titled with some major thing about the world. This is where you break down what is so great about the game world into component pieces and describe each one.

### World Feature #2

Same thing here. Don't sell too hard. These features should be awesome and be selling the game on its own.

## *The Physical World*

### *Overview*

Describe an overview of the physical world. Then start talking about the components of the physical world below in each paragraph.

The following describes the key components of the physical world.

### *Key Locations*

Futuristic city of a cyber punk theme

### *Travel*

The character runs throughout the city

### *Scale*

The style is Chibi because we thought that having our characters more animated than realistic would add to the charm of the game. The bigger face gives the characters more personality due to the fact her face features could be animated. It also makes her stick out from the background and appear as more recognizable.

### *Objects*

Daggers are laid out in the map for the player to pick up. The daggers art is futuristic.

Health packs are also present so that the player can refill their hit points. The med-pack is a custom version of a standard in game or real-life health pack.

## Rendering System

### *Overview*

The game is rendered using SFML 2.5.1

### *Camera*

## *Overview*

The camera is ultimately stationary but comes off as moving as the background and game entities are moving.

## Game Engine

### *Overview*

This game runs off of the SFML 2.5.1 Library and a Candle Light Library

### Game Engine Detail #1

There are many headers and cpp files for each object and world environment that keeps track of the world and the event that occur in it.

### *Collision Detection*

Depending on the situation, we used collision boxes of Rectangle classes, or built-in SFML functions such as GlobalBounds and FloatRects.

## The World Layout

### *Overview*

The world is set in a Futuristic City which can be seen in the background.

The platforms resemble a street path.

### *World Layout Detail #1*

The idea was to use bold neon colors which we can notice on the characters and some of the buildings.

### *World Layout Detail #2*

The game is set at nighttime to emphasize the dangers of city life.

## Game Characters

### *Overview*

There are two characters in this game.

The first is a resistance fighter that is trying to take back her city. She is a Chibi futuristic female character.

The Green Bloods are the enemies of the game. They are seen by their green coloration and Cyber punk, evil green aesthetic. Hiding their criminal identities with a hoodie and mask.

### *Enemies and Monsters*

The main enemy in the game is the Green Bloods.

They spawn on top of platforms and do not move.

They have an AI system that tells them to fire their ranged weapon or use their sword.

If they take damage from the player, they fall on the floor and die.

They have an unlimited amount of throwables and respawn as the game goes on.

The player should focus on defeating these enemies to make gameplay easier and raise their score.

## User Interface

### *Overview*

The UI is a simple UI that only details what the player needs to see such as health and score and number of daggers the player has left.

### *User Interface Detail #1*

The top left of the screen features the amount of life that your player has left, this is shown through 3 hearts. Every time the player damages you, you lose a heart.

### *User Interface Detail #2*

The right side of the screen features the score counter and the amount of throwing knives that the player has. The score goes higher as you progress through the game and the number of knives either diminishes when the player uses one or increases if a pickup is acquired.

## Weapons

### *Overview*

The player utilizes a throwing knife and a sword in order to defeat enemies

### *Weapons Details #1*

The main weapon of the game is a sword that the player can swing. It is a close ranged weapon and will attack only enemies in front of the player.

### *Weapons Details #2*

The throwing knife is the ranged weapon. The player can choose to use one of their throwing knives and shoot it in a straight line to attempt to hit an enemy. You are limited to a certain amount of throwing knives and can top up on them by getting pick ups.

## Musical Scores and Sound Effects

### *Overview*

The sound utilizes realistic / standard game noises for throwing damage and other player movements. The background music is an upbeat soundtrack cyber-esque techno track.

### *Story*

The city is being terrorized by an evil futuristic gang that is trying to infect the city. You as the player control a resistance fighter who's goal is to defeat the evil gang and reclaim the city.

### *Victory Conditions*

This is an endless runner so the player is encouraged to keep going as far as they can without losing.

## Character Rendering

### *Overview*



Characters and environment are rendered using SFML 2.5.1 and displayed through its library

### Project Milestones

This is definitely the project we are most proud of. The assets turned out amazing and despite the C++/SFML environment being definitely more complex than game engines, we still came up with a full working game. It was however very time consuming but that allowed us to learn as we were going.

### Project Review and Conclusions

That project was challenging on so many levels but we could overcome most difficulties if not all. If we feel frustrated at the start, we get that sense of satisfaction and relief when we finally figure out the problem. The efficient communication within our team really helped with that as well.