

Swerve!  
Game Design Document  
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## Game Overview:

Title: Swerve!

Platform: PC Standalone & Android

Genre: Top-Down 2D Survival Action Racing Game

Rating: (10+)

ESRB Target: Hardcore Gamers (30-31)

Release date: December, 2018

Publisher: Cool Games Company

Swerve is a top down 2D survival action racing game where our players main focus is to try to swerve out of the way of obstacles including cars racing right at you! The player will explode if they come into contact with one of the obstacles and lose the game. Although our player does not come equipped with any weapons, they can score points by making enemies explode. Together with some quick reaction times and clever driving the players primary task is to rack up as many points as possible.



## High Concept

Swerve! Sets the Player in a small enclosed field where enemies will spawn and chase the player relentlessly. Stop the onslaught by forcing them to crash into each other!

## Selling Points

- Hardcore Action
- Explosions
- Multi-Platform

## **Platform Requirements**

PC: Windows XP SP2+

Graphics card: DX9 (shader model 2.0) capabilities; generally everything made since 2004 should work

Mobile: Android OS 2.3.1 or later; ARMv7 (Cortex) CPU with NEON support or Atom CPU; OpenGL ES 2.0 or later.

## **Synopsis**

You just got this cool new car and some bad guys are really angry about that. They want to teach you a lesson by crashing into your car. You obviously don't want your insurance premiums to go up, so swerve!

## **Genres**

Top-Down 2D Survival Action Racing Game

Top-Down 2D: We use an orthogonal perspective on the XY plane to display our game.

Survival: The objective of the game is to last as long as possible.

Action: The game is fast paced and requires good reaction time and quick planning.

Racing: features a "car-like" control system in which the player turns their wheels.

Game: It's a game!

## **Game Objectives**

The objective of the game is to destroy as many enemies as possible before you get destroyed by one of them!

## **Game Rules**

The game is an enclosed environment set to a random open park with sparse dirt roads for the player to drive around. There are various enemies which spawn at random in a small zone in the center of the map. The player earns points whenever an enemy crashes and explodes. The player will also earn 1 point for their death.

## **Game Structure**

1. Splash Screen & Difficulty Selection
2. Gameplay (Endless)
3. Losing Screen

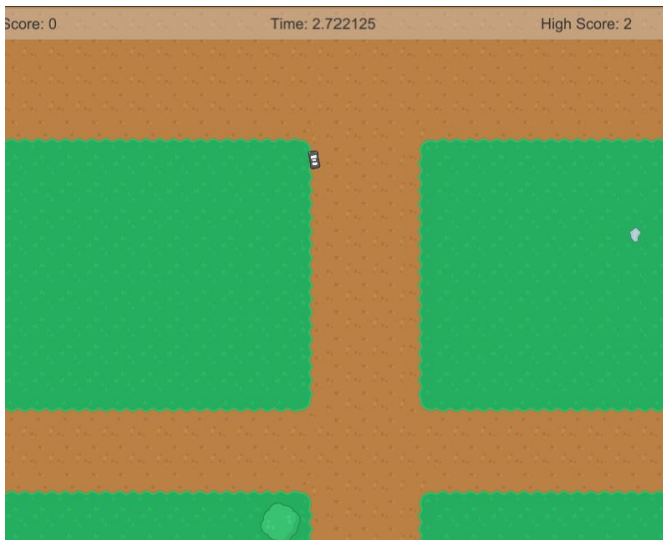
## Game Controls

PC: LEFT-ARROW: Rotate car to the left  
RIGHT-ARROW: Rotate car to the right  
MOBILE: TOUCH LEFT-HLF: Rotate car to the left  
TOUCH RIGHT-HLF: Rotate car to the right

\*Mobile allows for both horizontal and vertical displays.

## Game Camera

The game camera is set to an orthogonal perspective facing the XY plane. Once the game starts the camera will be set to follow the player's position with a small amount of ease. The camera will try to keep the player focused on the center of the screen at all times, but the ease will prevent this and will force the camera to "lag behind" by a bit. The camera will then show less land in-front of the player compared to what is behind them. This is to encourage players to swerve and turn more.



## Player:

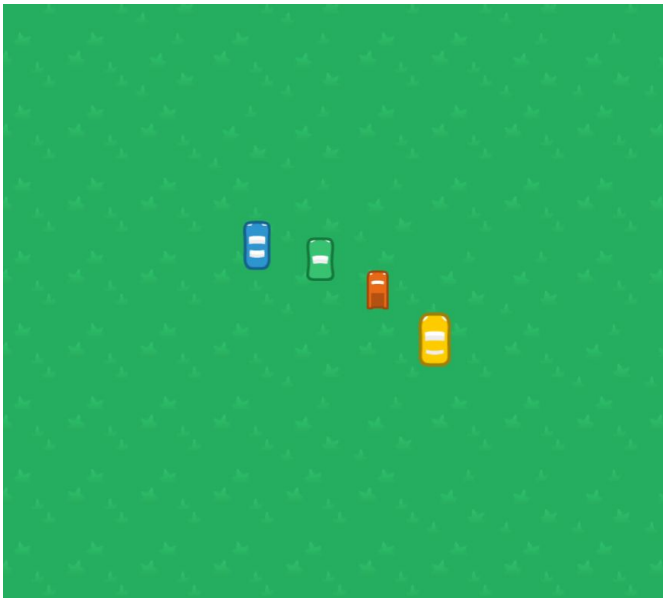
A super cool brand new car! The color selection is currently only Jet Black. The Car will move forward continuously, the player may only turn the car and cannot stop the car without crashing.

### Metrics:

Speed: x7.0  
Turning Radius: x125.0

## Enemies:

Enemies will spawn within a small square near the middle of the entire stage. Enemies will then chase the player endlessly until they collide with some object.



### Blue Enemy:

Speed: x10.0  
Turning Radius: x100.0

### Green Enemy:

Speed: x9.0  
Turning Radius: x125.0

### Red Enemy:

Speed: x14.0  
Turning Radius: x100.0

### Yellow Enemy:

Speed: x8.0  
Turning Radius: x200.0



## Objects:

### Destructible Objects:

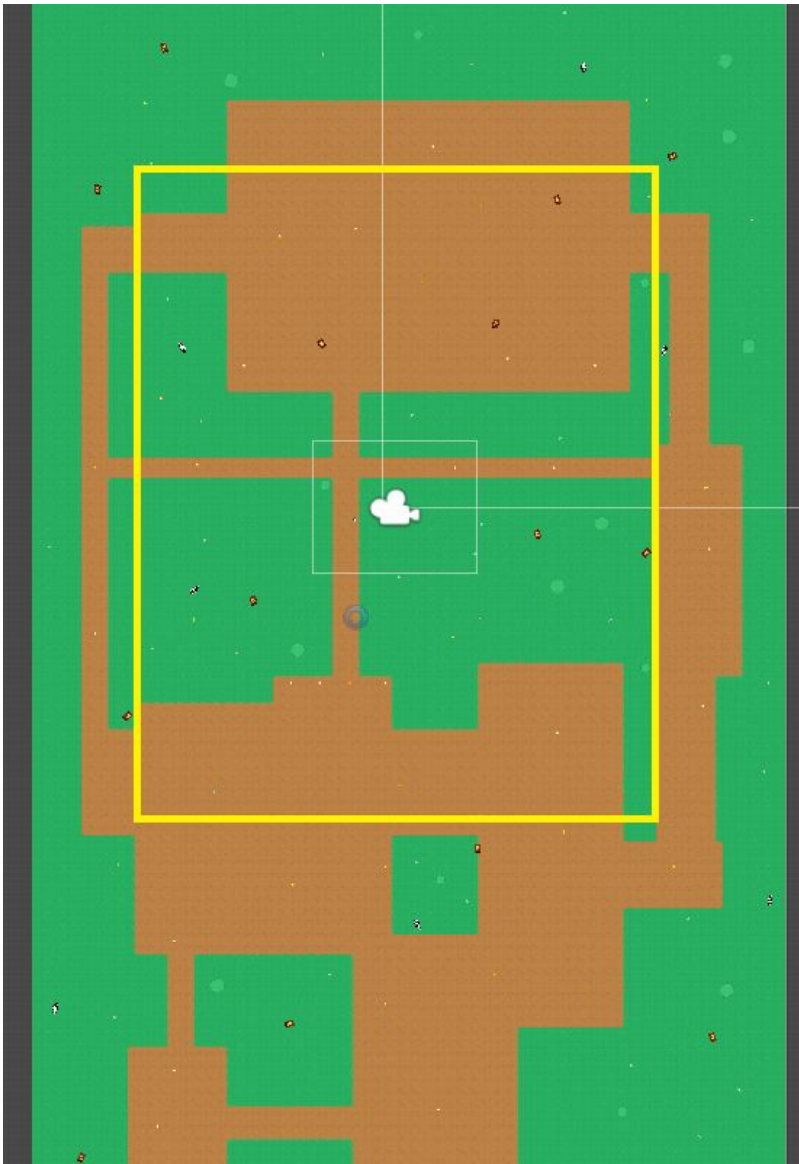
Gas Tank (Large), Rock (Large & Small), Cone (Small)

### Special Effects Objects

Explosion (Small & Large)

### Indestructible Objects:

Tree (Large), Bush (Small), Duck (Small), Cow (Large)



## Environment:

The game takes place in an open empty field with some few roads and objects littered throughout. Enemies will spawn within the yellow rectangle, driving outside of bounds will result in an explosion.

## Level Design:

The focus was to prevent the player from driving straight to long, the orientation of the map will prevent a player from going horizontally too long but not vertically. This was to help balance the android build. The map was designed in a way that when playing with your phone on landscape orientation you will have more vision to the right or left and players will be drawn to drive in these directions. To offset this I learned it would be better if they weren't allowed to drive horizontally for long and instead would need to riskier option of driving vertically.

## HUD

Score: Total enemies destroyed so far.

Time: Total time elapsed since we started driving.

High Score: The highest score achieved so far in the session.



## Audio

Name	Category	Description
Background	Background Music	Plays during the game.
Explosion	FX	Plays when any vehicle explodes.
Horn	FX	Plays when any tree is hit.
Moo	FX	Plays when any Cow is hit.
Quack	FX	Plays when any Duck is hit.
Squeel	FX	Plays when the player starts a new round.

## **Wishlist**

1. Improved Player Selection
  - a. Allow the player to select from various different cars to customize their gameplay.
2. Visual Effects
  - a. Add more special effects such as burn stains after explosions, sparks when players get too close, and special effects when crashing into destructible and indestructible terrain.