# Game Design Group 10

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## Game Overview

### Introduction

Our game will be a fast, unpredictable and highly competitive 4 player 3D racing game. Players will race from one checkpoint to another in a constantly changing arena, when the checkpoint is reached players will be placed into teams (free for all, 2 vs. 2 or 3 vs. 1), receive handicaps depending on their performance and play a minigame. The winner of the minigame get a point, first player to get 3 points wins

### Target Audience

The intended audience for this game is primarily casual gamers who like playing racing games with friends since the game can only be played using LAN multiplayer. But we think other gamers will also find this game a lot of fun thanks to the minigames.

### Platform

This game will be made for the PC.

## Game Setting

### Story

At the start of the game the 4 players and their cars are dropped inside an arena somewhere on earth. They will battle against each other in small games, winning games earns you points. But there is a catch… The players must first race to a checkpoint, finish last and you might have a hard time winning the next game.

### Characters

Each player can choose 1 of the 4 available cars at the start of the game. These cars will have identical performance but different appearance.

**Players:**

* Red car
* Blue car
* Green car
* Yellow car

During the game you can encounter multiple enemies.

**Enemies:**

* Zombies (cars??)
* Other enemies

### Setting

The game takes place somewhere in a giant arena. In the arena 4 players race against each other in attempt to win the ultimate bragging rights.

## Game Mechanics

### Gameplay

Players have a 3rd person view of their character and are able to move it freely inside the arena. While driving towards the checkpoint objects will appear, disappear or move forcing the players to alter their route. At the bottom of the view players can see a mini-map which they can use to determine where they should go. During the race players have no health bar and cannot die, when all players reach the checkpoint the race is over and a minigame will start. Depending on the player’s performance he/she will have a better chance of winning the minigame. At the start of the minigame players will be placed into teams these will be visible at the top of the screen. At the end of a minigame all team members of the winning team will receive a point and a new checkpoint race will start immediately. The game is very fast paced and will keep challenging players since arena always changes.

### Physics

* Player can collide with each other this doesn’t deal any damage during the race but will during some minigames.
* Players can’t go through or move large props such as houses and trees, collisions will result in a direct stop of the player.
* Player can go move smaller object when collisions will result in the player pushing the object.
* Car movement is controlled by adding forces therefore cars need time to accelerate and decelerate just like real cars. This gives the game a very natural feeling.
* All characters are affected by gravity.

### Artificial Intelligence

**Enemies:**

Players will encounter several enemies during minigames, these enemies have some have some form of intelligence. When a player gets within a certain range of the enemy it will start chasing and attacking the player. When multiple players are within the enemy’s range it will attack the closest player. The enemy will ‘lose’ the player when he/she gets outside of the enemy’s range again.

**Arena:**

This isn’t an ordinary arena

## Game Elements

### Level

This game has just one level, this level consist of an arena in which the players race. But don’t expect this game to be boring, the arena changes every time you play the game. Even during gameplay things will change forcing you to rethink your strategy. Elements of the arena will randomly change so players must stay focused in order to win.

### Art

The game will be a realistic racing game that takes place inside an arena somewhere in the desert. Most models and textures will fit into this description.

The models needed for this game are:

* 4 car models for the players
* Multiple enemy models
* Small prop models such as bushes and debris
* Larger prop models such as trees and houses

The car models will be inspired by dune buggies and have a tube construction. All cars will have the same base structure but differences in colors and textures will make the cars look differently.

- Dune buggy sketch

The enemies are used in minigames, these minigames can have different themes so the not all enemies will be in the same desert style. This will give the game a nice twist and catch players of guard.

The props are really important because they make the game feel alive and realistic. Without these props the arena would be very empty and not very interesting to race in. The location of the props will also change each time you play the game so players will get the feeling they are racing in a new arena so playing the game will remain fun interesting even after hours of playing.

### Sound and Music

The game takes place in the desert so the music will fit this theme. Since this is a fast racing game fast paced background music should give the game a nice feel. In the game there will be sound effects for the following event:

* Engine noise
* Car collisions
* Destroying objects/enemies
* Shooting
* Getting hit by shots

## User interface, Game Controls

### UI

When in the menu players have several options:

* You can host a new game using the create game button
* You can join a game using the join button
* You can view the controls using the controls button

When a player decides to play a game they can select the car they want to drive by clicking one of the 4 car images.

### Controls

Players can control the car that they are driving in and perform other actions such as shooting.

* Accelerate – up arrow
* Decelerate – down arrow
* Steer left – left arrow
* Steer right – right arrow
* Shoot – spacebar