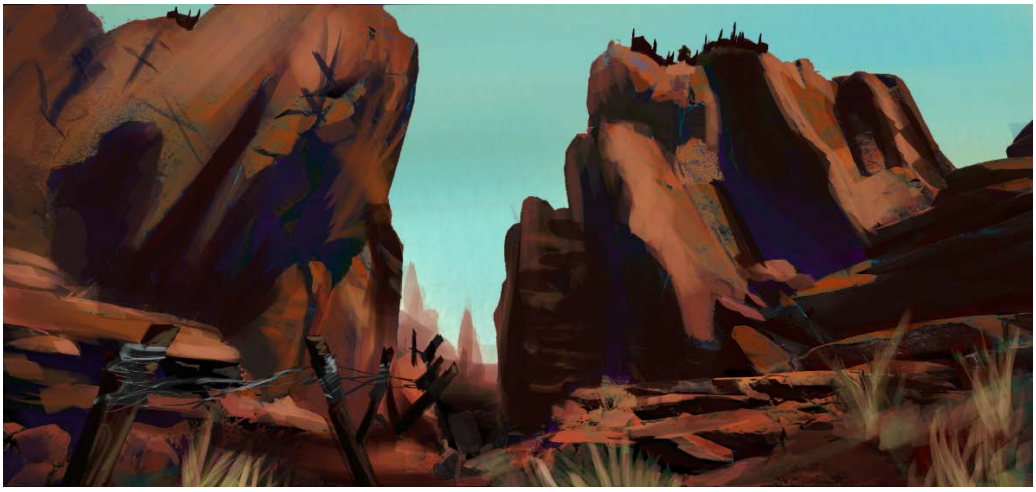
COMP250 AI Component Outline

NasChair: Game High Concept

My game project is a local multiplayer racing game set in a post apocalyptic world where office chairs are the go-to mode of transport for our eclectic group of aspiring Mad Max background actors that make up our character roster. The game features a unique control scheme unseen before in racing games where there is no constant forward momentum, instead the player controls the rotation of the chair and then kicks for a split second to provide forward momentum, and to help level the playing field, there's a wide selection of power ups and items that are dotted around the various tracks.



Concept Art of First Track

Component Functionality

The AI functionality in our game is at very basic level where it simply follows a pre-set spline around the track, and as such doesn't deliver much divergent gameplay as they always follow the same path so they are very predictable. As to this point, we are going to tear out the old system and implement behaviour trees, which will allow the AI to react to more situations and appear more human like. Depending on how the BT implementation goes, we will either add another spline and then allow the AI to follow the different paths around the track depending on the situation in the race they are in, if we have time, my team discussed replacing the spline following with more complex behaviours such as active collision avoidance to make them move forward in a more realistic manner.

Fitment of Component into game

As many triple AAA games feature AI to provide a more realistic racing experience, my team felt it would be important to capitalise on this fact and include them in our game, as it both increases the user's immersion and adds replay value. And by utilising behaviour trees, this

will create much more interesting gameplay as they will be much more divergent and thus create much more interesting gameplay for the players.

Key Requirements

The key requirements of the integration are going to be use of the Behaviour Designer from the Unity asset store to allow us to implement the trees in such a way that they can used or changed by nearly any member of the team as it is important that they are easy to use if anyone else feels that they need to make changes to the way the AI behaves. #

The Key requirements of the AI will be to replicate the earlier AI we had which would simply follow a spline, while building on that concept and allow itself to make decisions and follow other paths and carry out other tasks such as attack PCs and self-right if they fall over.

Scope

I'd say the scope is appropriate to the time frame as we already have the base framework we need for the spline following, and the behaviour trees can be built in a matter of hours depending on the actions that we choose to implement into the game.