

# FACULTY OF SCIENCE, ENGINEERING AND COMPUTING

School of Computer Science and Mathematics

MA GAMES DEVELOPMENT (DESIGN)

CI7860 PERFECTING THE LOOK  
REPORT

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**Project Title:** A Day in Zombie's Life

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**Box Link:** <https://kingston.box.com/s/w3x8o8j1xwqsjb3utt1ahrn3k94o8zbo>

## Kingston University London

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This is a student project. Therefore, neither the student nor Kingston University makes any warranty, express or implied, as to the accuracy of the data nor conclusion of the work performed in the project and will not be held responsible for any consequences arising out of any in accuracies or omissions therein.

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## OBJECTIVE & DELIEVERABLES

My objective for this project was to learn the proper pipeline of how CGI elements worked and were added into movies, as well as implement my narrative skills in a slightly humorous and dark manner. My initial set of objectives were different and slightly ambitious, since I planned on modelling at least one element in the scene.

## CONCEPT

My concept, “A Day in Zombie’s Life”, is about recreating a zombie’s everyday life. She usually is found yelling in alleys and walks awkwardly on fields to go back to her house. With mild humor and dark music, I believe this fits well for my submission. The reason behind choosing this as my concept is because I get to use a couple of techniques just in one video. From camera projection, to tracking and eventually using an animated character.

The story board below explains the flow properly. The video majorly revolves around switching between two videos, Alley and Field. The only difference between this and the rendered footage, is that, it contains no fire, and is taking place in a well-lit environment. The timings have changed as well.

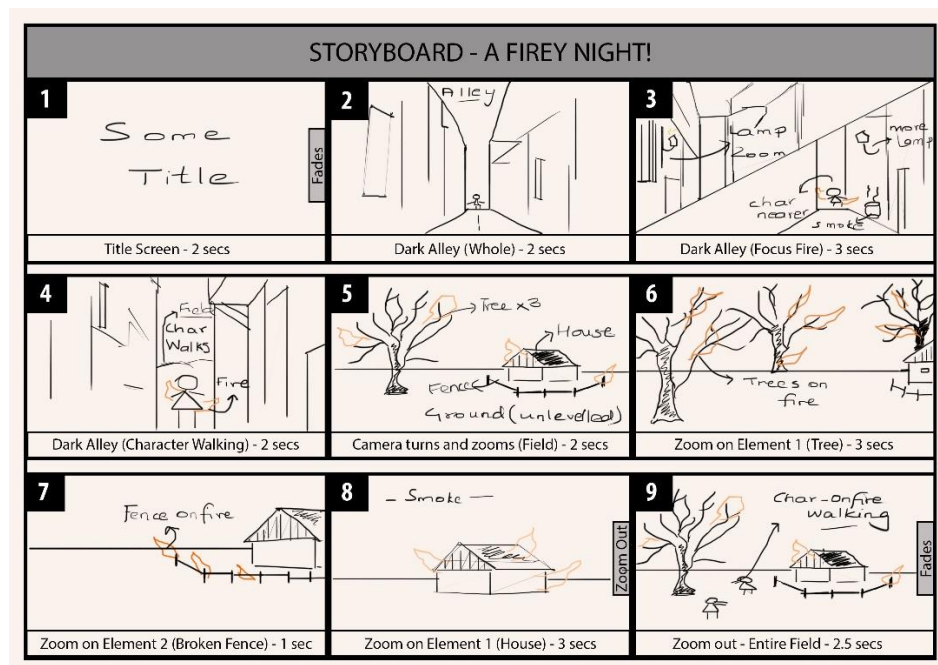


Figure 1: Storyboard

Initially, the idea was about creating a “Firey Night”, which involved emissions coming out of any CGI elements placed in the scene. This was changed due to technical issues beyond my understanding/skill. I encountered an issue in Maya, which did not let me see the emissions anymore, once everything was brought together.

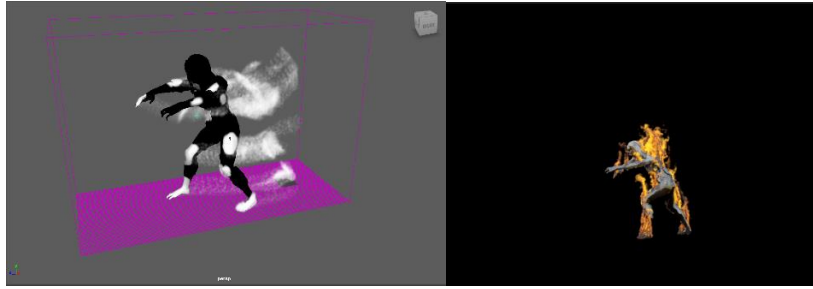


Figure 2: Zombie with Emissions (Not used)

## CGI ELEMENTS

I downloaded and purchased my CGI elements from **Mixamo** and **Free3D**. My concept required an animated Zombie, abandoned house and a dead tree.



Figure 3: Character



Figure 4: House



Figure 5: Tree

## WORKFLOW

### FOOTAGE 1 – ALLEY

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#### VIDEO FOOTAGE

I used a 2D image rather than a video since I wanted to experiment with Camera Projection Technique. I first used the Grid node and then used the card to project these images, with the help of Project3D. There wasn't any Camera Tracking involved, since the scene was an image being 3D projected. The image was shot on a **OnePlus 5**.

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#### MAYA AND NUKE

After having done so, I later converted this file to an fbx, which I imported in Maya for using it as a reference.

In Maya, a plane with Arnolds shadow material was created, to check for accurate shadows. Since my scene did not have a lot of objects in it, I created two render layers for my character and its shadows. The scene also did not have much requirement for different types of AOV's and hence, only diffuse and specular was added. I had an overall of 100 frames to be rendered.

A skydome was also added with an HDRI image, along with a directional light to make sure my character didn't look too dark.

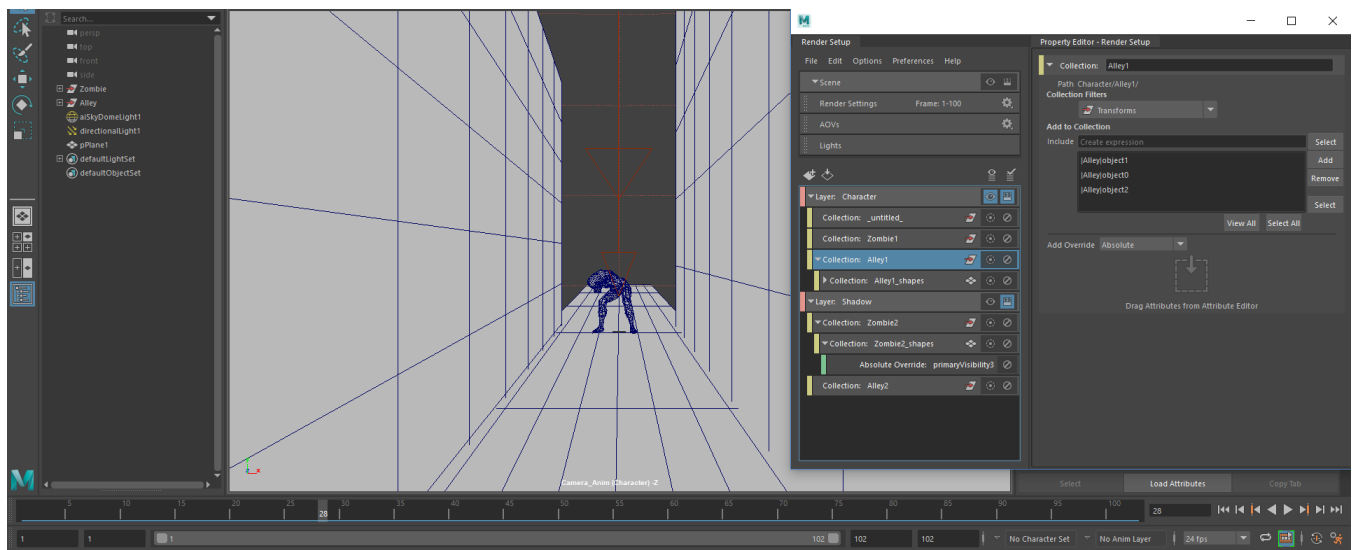


Figure 6: Zombie in Alley

After rendering the sequence out, I added the export to Nuke for compositing, where I separated the AOV's using Shuffle nodes and edited them accordingly. A bit of Color Grading was done as well to both the character and the footage.

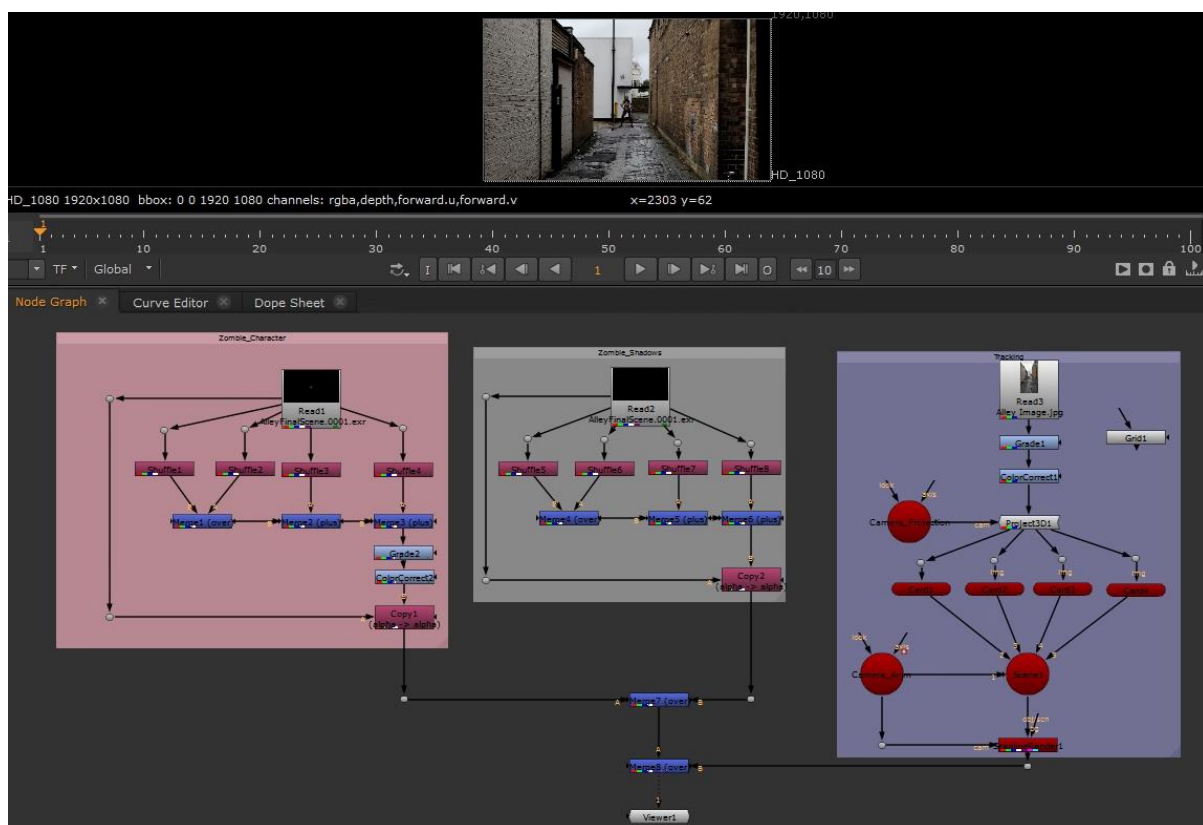


Figure 7: Zombie's Nuke Nodes

## FOOTAGE 2 – FIELD

### VIDEO FOOTAGE

For this part of the project, I recorded the field behind my Halls. Initially the video was recorded on a **550D**, but I couldn't go ahead with it because the video was panned, and Nuke's tracker didn't do too good with it. I later recorded another footage with a **OnePlus 5 phone** which, although low on quality, was more suitable for tracking. I converted my video to an image sequence which was used for tracking in Nuke.

### MAYA AND NUKE

I tracked my field footage in Nuke and added a card to check if my tracks were working properly. Later this was converted it into an fbx, which was later taken to Maya. I divided this part into two bits and worked on the placement of house and trees first and then the character, by using the tracked points as reference. The scene is put up in a similar manner as the previous one, where I put a plane that received shadows, and later went along with similar render layers, that is, one for my objects and the other for its shadows. I added the plane and unchecked its visibility for the first layer, since I didn't want it rendered out. AOV's included the same as used before, diffuse and specular. I also added my character to check for proportions and paths.

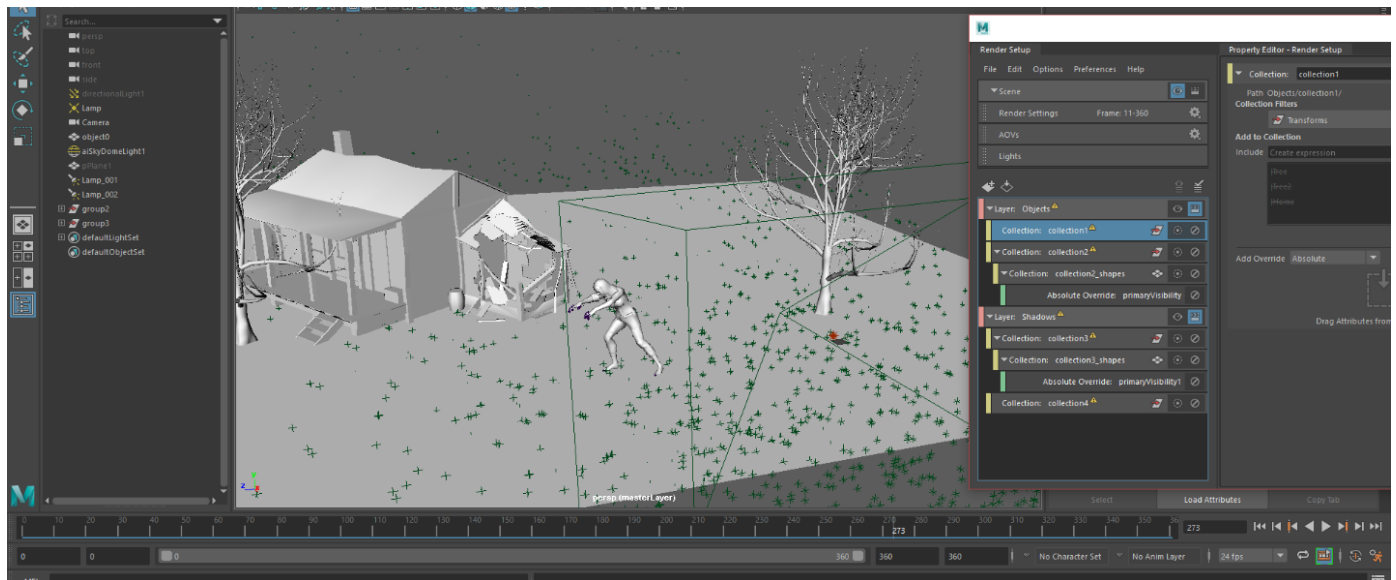


Figure 8: House and Tree Placement

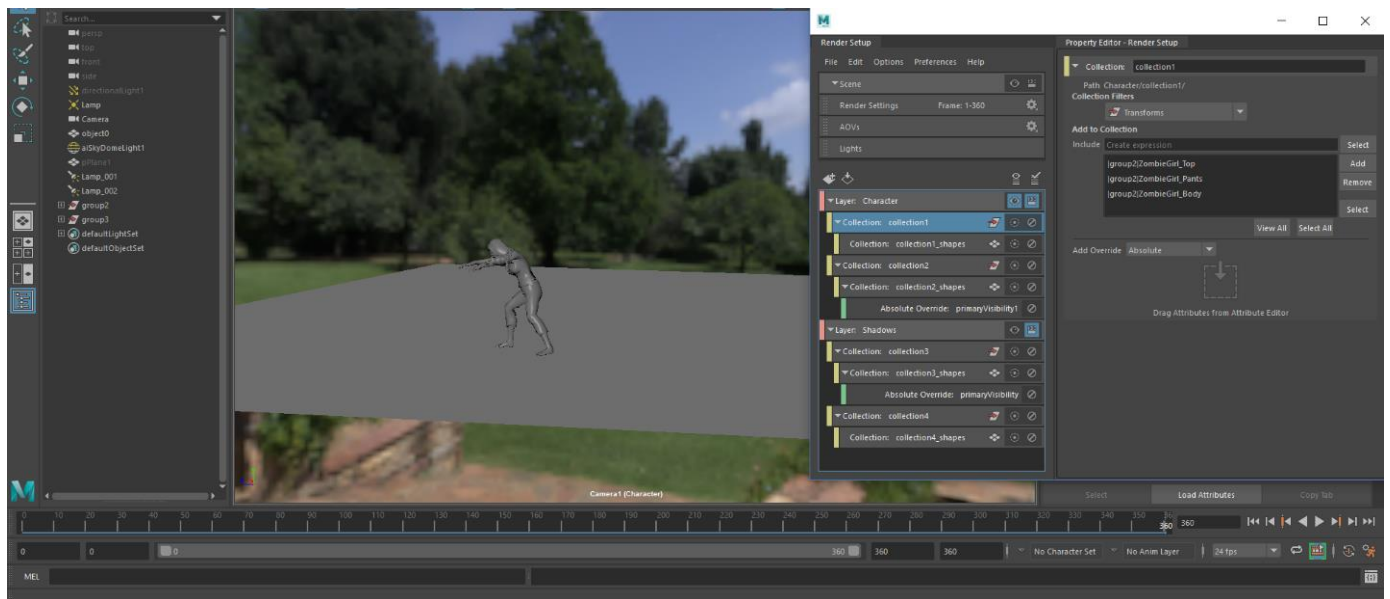


Figure 9: Zombie Placement

After rendering out 306 frames, I added them to Nuke for compositing. The scene required color grading because the original footage appeared too bright, whereas the character and objects slightly dark. A merge node was used to combine both zombie and objects and later merged with the footage.

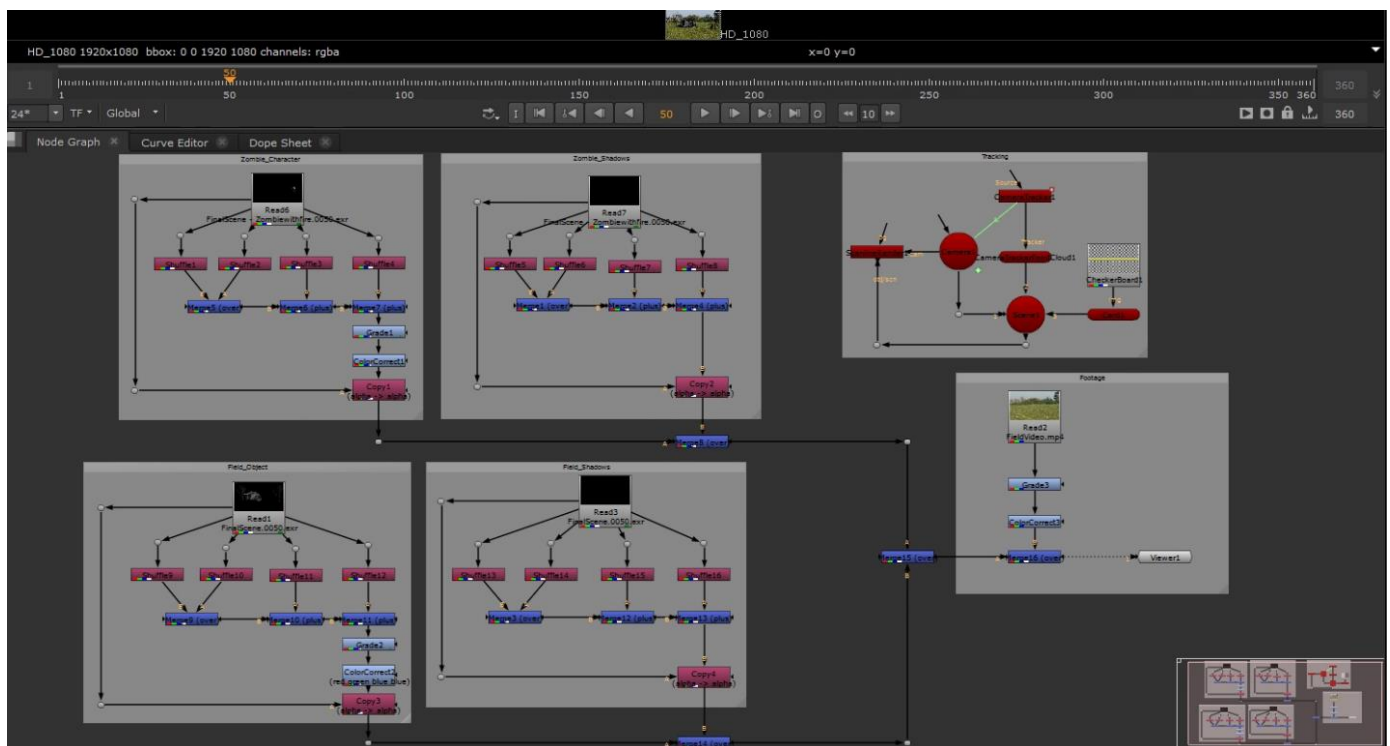


Figure 10: Objects and Character's Nuke Nodes



## COMPOSITING



Figure 11: Final Composite - Alley



Figure 12: Final Composite – Field

## CREDITS

### FREE ASSETS DOWNLOADED

- Zombie Character – Agonizing & Walking Animation
  - <https://www.mixamo.com/>
- HDRI Image
  - [https://hdrihaven.com/hdri/?c=skies&h=symmetrical\\_garden](https://hdrihaven.com/hdri/?c=skies&h=symmetrical_garden)
- Audio
  - <https://freesound.org/people/Zetauri/sounds/326984/>

### PURCHASED ASSETS

- House
  - <https://free3d.com/3d-model/old-house-7235.html>
- Tree
  - <https://free3d.com/3d-model/tree-without-leaves-5749.html>