# Assessment 1: My Profile

COSC2196 – Essentials of Information Technology

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# Personal Information

Hello world!

My name is Aaron, I'm 29 years old and I was born right here in Australia, down in the SE suburbs of Melbourne, where I currently still reside. My family is originally of English, Irish, German and French descent, but on both sides of the tree, we have been here in Australia for at least 6 or 7 generations now. I have only travelled abroad to New Zealand thus far, and only know how to speak English. Learning another language is something I would love to do some day though, and I can't wait to visit countries in Asia and Europe, such as the UK and Japan.

My education history is a somewhat spotted one to date. I completed year 12 VCE back in 2010, and since then have studied a couple of different courses through TAFE, the first being game design/animation and later accounting. Unfortunately, I never progressed far into either of these fields, as I have always struggled to find the drive and a real calling to go after in my professional life. This is my first attempt at university level studies, in a field that has always captivated my interest, and I am hopeful for a positive result after having reached a certain level of maturity and experience in my life.

In my work life, I have held a multitude of rather mundane, unnoteworthy roles to date, with most of my experience being in the fields of administration, cleaning and warehousing. My current role is in retail, where I currently work 2-3 days a week. It's not where I'd ultimately like to be, but it pays the bills, and provides the flexibility I need in my life to do things such as study this course.

Outside of work and study, I'm usually quite a private person. I love my sports, with some of my favourites being soccer, AFL and cricket, and I'm a massive Manchester United fan, having watched most every game live since about the age of 15. It's my dream to go to Old Trafford one day and watch a game in the flesh. I've always been an avid gamer, although I tend to mostly play older games nowadays like HoMM3, Diablo 2, RL and (classic) WoW. I've got a fondness for music and movies from the 80s, and my friends and family like to joke that I'm a bit of an old man, so I guess you could say that I'm quite old fashioned and nostalgic. I don't get out a whole heap, but when I do, I enjoy going on adventures with my 3 dogs, Lily, Teddy and Kewpie, and my girlfriend, Ebony. We're both foodies, so good recommendations on places to eat are always most welcome!

An interesting fact about myself is that I lived in New Zealand, specifically Christchurch, for about 2.5 years between 2013-2015. Thankfully, this was after the massive earthquakes that destroyed a lot of the city in 2011, but I still had to live through the aftermath, and with the anxiety that it could happen again at any moment when we felt a mild shake. Piles of rubble, rundown buildings and gaping holes in the earth where skyscrapers once stood were commonplace, and there were entire suburbs which had been condemned due to rising sediment and marshlands. That wasn't to say it was a bad time in my life though. It wasn't always easy, but the country in general was beautiful, and the people welcoming, even if they bantered me for being an Aussie. So overall, I look back on my time there fondly and can't wait to go back again.

Here are some photos of myself and all the gorgeous girls who I'm lucky to share my life with, out and about on our adventures.

# Interest in IT

## What is your interest in IT? When did your interest in IT start?

My interest in IT began at a very young age, probably as young as 2 or 3 years old, with devices such as a Windows 95 PC, television, the Gameboy, and SNES. For as long as I can remember, I have been captivated by technology in one way or another, having either a device in my hand, or a screen to sit in front of. As a shy, introverted kid growing up in a broken home, I think the thing that interested me most about technology back then was the escape it offered from reality, and the ability to explore and become enveloped in new and exciting worlds.

Going into my teenage years, and now as an adult, this is an interest which has only continued to be piqued. I feel privileged to have grown up alongside an age of incredible technological advancement. Seeing the birth and progression of the internet, where we are now all connected with one another, to smartphones becoming extensions of ourselves, and the giant leaps in gaming and animation we've made, going from 2D pixels to hyper-realistic 3D worlds. Modern technology is just incredible. What the future has in store is just as exciting to me though. Seeing the advancements being made in robotics and AI, where fields like virtual reality are currently heading, to even things such as self-driving cars, and tech which can read your brainwaves and produce images or actions based on your thoughts. I look to the future with starry eyes and wonder about the implications this will have on humankind and know that this is a world that I want to be a part of shaping.

## Was there a particular event or person that sparked your interest? Outline your IT experience.

The people in my life which first sparked my interest in IT were my parents, and my two uncles, one of which has always been more of a big brother to me due to our small age gap. Some of my only happy memories of my parents being together were those where we spent gaming as a family. It was wanting to share that experience with them that got me started in the world of technology. This continued with my younger uncle, who took me under his wing and kept me up to date with all the latest tech, whether that was gaming consoles, music players, phones or toys. My older uncle is who helped begin my fascination with the world of PCs. Whether that was teaching me DOS commands to run certain programs, how to troubleshoot problems, how to format and reinstall Windows, build machines, or things like burning and torrenting, I learnt an abundance from him. As such, I owe both my uncles a lot when it comes to my current knowledge and interest in IT today.

I wouldn't call my experience in IT vast in a technical sense, despite my life-long use. I've often been the "computer guy" for my friends and family, and I do love the problem-solving aspect and reward that comes with troubleshooting problems for yourself, or with building a new machine and choosing new devices. I'm somewhat knowledgeable on computer hardware, but it is the software side of things where I am keen to expand on my limited knowledge, specifically in programming and how things work behind the scenes.

## Why did you choose to come to RMIT?

The truth of the matter is, my choice in RMIT wasn't one in which I specifically sought out the university, but rather it was suggested to me. I had decided to go back and attempt university studies and that OUA was the pathway I would take. I knew I wanted to study IT, but I didn't know the specific area I wanted to study in. From there my representative outlined a few different degree options and suggested RMIT as it had different pathways I could take after completing the introduction units. After some research into the course and asking a friend who'd studied web development here at RMIT about his experience, I concluded that this was the best option for me.

The reason behind me coming back to do university level studies at RMIT is as stated earlier. I have always had an interest in IT, with it being something that has come rather naturally to me, and I would like to get the appropriate qualifications, skills and knowledge to forge a successful career in the IT industry. I want to be part of the future of tech, and I believe RMIT will help me in achieving this goal.

## What do you expect to learn during your studies?

I have already learnt a little of what I had expected to learn during my studies here at RMIT, mainly about the many different roles available in the industry, and that I quite enjoy the logic and problem-solving challenges that come with programming. I had hoped that from this course I would have a better idea of what IT careers are out there, what those roles entail, the skills I'll need, and a clear goal for the path I'd like to head down and how to achieve it. Along with this, as stated above, learning the appropriate qualifications, skills and knowledge to succeed in multiple IT sectors.

# Ideal Job in IT

## Job Advertisement

**TANTALUS**

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### Senior Programmer - Video Games

Tantalus Media

Fortitude Valley, Brisbane QLD

Developers/Programmers (Information & Communication Technology)

Full time

Posted 10d ago

Did you know the video games industry is worth over $300B and continues to grow at an eye watering rate!

With continued forecasted growth and various government incentives, the Australian and Global Video Games market is craving for experienced C++, C#, Unreal Engine, Unity Programmers.

Tantalus Media forms part of the Keywords Studios group, one of the world's biggest "go-to" providers of technical services across the games industry with 70+ studios across 23 countries.

With several AAA titles from some of the world's best publishers in the pipeline, we're looking for Experienced Game Programmers who are eager to help us deliver the consistent level of quality and service our Tantalus business is renowned for across the globe.

With over 100 games under our belt, including franchises such as Age of Empires, The Legend of Zelda, Cities Skylines, Sonic Mania and Mass Effect (just to name a few), we're only now scratching the surface of our team's potential.

The Role:

- Working closely with producers, game designers and artists to implement game features using C++, C#, Unreal Engine or Unity
- Testing, debugging, refining, optimising and maintaining game functionality on console and PC platforms
- Staying up-to-date with new technologies and architectures
- Following Tantalus' standards and best practices
- Assisting and mentoring other programmers in your areas of expertise

**Requirements**

Skills, Abilities and Qualifications

- Excellent programming skills in a strongly-typed language in C++, C#
- Excellent problem solving skills
- Strong skills in at least one game related discipline (e.g. 3D Maths, AI, Physics, UI, etc.)
- Ability to write clear, maintainable code
- Demonstrated ability to create and deliver to deadlines
- Ability to work as part of a team
- Excellent written and verbal communication skills
- Good interpersonal skills and pleasant personality
- Ability to ramp up quickly with unfamiliar code bases or technical skills.
- Bachelors degree or higher in Computer Science/Engineering, or equivalent experience
- A genuine enthusiasm and passion for the games industry

Desirable

- 5+ years' professional software development experience
- Experience interfacing with 3D art applications (e.g. Maya)
- Ability to quickly ramp up on unfamiliar code bases or technical skills

**Benefits**

The Benefits:

- Competitive Market Rate Remuneration
- Hybrid flexibility to work from home and in the office
- Best of Both Worlds - Perks of a global business with the intimacy of a small business
- And the best part – you get to be part of the next generation of programmers and work with from some of the best in the industry

We are proud to be an equal opportunity employer and are committed to fostering a work environment that is inclusive, supports flexibility, and welcomes diversity.

For more information regarding this position, please don't hesitate to contact Stan Rolfe on +61 416048976

[i]Figure 1: Job advertisement for a senior programmer for Tantalus Media (Seek 2022).

## Job description and why it appeals to me

Tantalus Media is seeking an experienced game programmer with a strong knowledge of the C++ and C# programming languages, and the Unreal and Unity game engines, to assist them in the development of high quality, AAA standard video games. This person will work closely with the other departments of the company, in a team environment, to implement the games features using their experience in these above-mentioned skills. Some of the tasks the successful candidate will be required to perform as part of their duties include testing, debugging, refining, optimizing and maintaining the games code for both PC and console versions. They will be expected to maintain up-to-date knowledge of all the relevant technologies and architectures in their field, and to assist or mentor their fellow programmers where needed with their knowledge in their area of expertise.

'Tantalus job description, refer to figure 1'

There are many reasons why this role in particular appeals to me. Having worked for both small and large companies in the past, I can say without a doubt that I much prefer working for the latter. While small companies have their benefits, I feel there is more room to grow and move up or across the ladder while working for a larger organisation, and I like the dynamics of working with a larger group of people and the defined structure that comes with it. The added job security and increased networking opportunities available would also be a firm positive. With Tantalus Media being a mid-sized company, that already has an established history of producing top quality, AAA games, I feel like this job ticks all my boxes and would be a better fit for me than working with a small, niche team, developing indie-type games with little to no budget.

I would take great satisfaction and pride in having my product reach a larger audience and feel this would be my best chance to make an impact in the industry. Video games are something that I have always been passionate about, with many of my earliest and most cherished memories and friendships coming from those experiences, so the opportunity to work in this industry and create my own piece of gaming history would be a dream. I also have a tendency to get bored easily, so a career in something that is both challenging and ever-changing would be ideal for me. Even the aspect of working in Brisbane, with the gorgeous weather, in a buzzing hip town, sounds great when compared to the cold, rainy suburbs of Melbourne where I live now!

## Skills, qualifications and experience required for the position

When talking about the required skills for this job, obviously one thing that can't be overlooked is the technical aspect and experience needed to successfully apply. You won't get far in a game programming job without the necessary knowledge and experience with all the required tooling and languages. You will need to have strong proficiency in C++ and C#, as these are the most commonly used languages in game programming. A huge part of this programming is problem solving, and to be successful, you need to be able to do more than just follow instructions and write code. Some things don't have pre-defined answers, you need to be innovative and able to think up solutions to problems by yourself.

As well as being able to write the code, it needs to be well structured, and maintained, as working in large teams means not only you will be working on the project. Thus, other people need to be able to clearly interpret what you have done and why you have done it. Like any job, your communication and interpersonal skills need to be top notch, friendly and professional if you're going to be an effective member of a team, something that is often overlooked by some looking to get into a career in IT. Setting and meeting deadlines are incredibly important in the gaming industry too, as budgets are often stretched thin, stakes are often high with many invested parties and time is precious, so it is something that you need to be able to meet and do independently. Though not absolutely required, it would be advantageous to have the ability to learn unfamiliar codebases and skills quickly, as well as have a background interfacing with 3D art applications.

As for qualifications, they are seeking somebody that has completed at least a bachelor's degree in computer science or engineering or has the relevant proven experience in all the areas listed above. As this is a senior role, they would prefer somebody with at least 5 years' experience. Lastly, they want somebody who is passionate about games. A person who is enthusiastic about the job they are doing, will often offer a lot more to the plate than somebody who is just going through the motions and getting the job done. You're probably not going to be innovative, at the forefront and go the extra mile if you're not passionate about what you're doing.

## Skills, qualifications and experience I already have

While I don't have any of the qualifications required or experience and knowledge with the technical side of things just yet, there are some skills I already possess from my past work and life history that will put me in good stead for one day being able to acquire this dream job. For one, I have always been very meticulous when it comes to the way things are organised, as well as in proofreading and formatting, which is very handy to have when writing and maintaining code.

I have often been told that my communications skills are excellent, as this is something I value highly in my everyday relationships as well as in the workplace. I take great care when it comes to written communication, as I always want to ensure that the message that is in my head is exactly what I'm getting across in writing. I feel like I have a very friendly and easy-going personality, although I'm not afraid to speak up or take leadership when required, which is beneficial to a team environment.

I love problem-solving and puzzles and will often get obsessed with things until I have figured out not only a solution, but the best one available. Most importantly, I am passionate about the gaming industry, having grown up and participated in it my whole life, and would relish the chance to be a part of it.

## Plan to obtain requirements for the position

To one day obtain a position such as this, the area I need to focus on most is the skills and qualifications, though I am already on the right track. Firstly, I am going to focus the next 5 years on getting my bachelor's degree here at RMIT. I am more interested in the computer

science side of things, so a switch over from the IT degree will be something I need to investigate as I move further into my studies.

As for the skills, I am hoping to learn the required programming languages over the next few years here at university, as well as in my own time. This is something I have already started dabbling in. I am quite interested in emulation and participate in the AzerothCore World of Warcraft community (https://www.azerothcore.org/). I have mostly been helping to debug modules and editing my own SQL databases, but as my knowledge increases it will be a good way to test my hand at game programming, as modules are written in C++, and I can see the results in-game.

Aside from that, I will need to investigate building my own portfolio over time to showcase my experience. Whether that be through internships, group work or creating my own projects, this is something I will look to add to as the years progress. My GitHub account will be a good tool for managing this. Networking will also be important, as you can't wait around for opportunities to fall in your lap. Hopefully this can be achieved throughout my time here at university, through the classmates I meet, the projects we do and connections I make.

# Personal Profile

## Test 1 – Myers-Briggs Type Indicator (MBTI)



The results of your personality test are in. Here they are:

**Personality type:** Defender (ISFJ-T)
**Traits:** Introverted – 76%, Observant – 96%, Feeling – 54%, Judging – 53%, Turbulent – 54%
**Role:** Sentinel
**Strategy:** Constant Improvement

'Figure 2: Your test results (and more!) (16Personalities, personal communication, 15 December 2022)'

**Strengths:**

- Supportive
- Reliable
- Observant
- Enthusiastic
- Hardworking
- Good practical skills

**Weaknesses:**

- Overly humble
- Taking things personally
- Repressing their feelings
- Reluctant to change
- Too altruistic

[ii] Strengths and weaknesses of the Defender (INFJ) personality type (16Personalities 2022).

## Test 2 – Learning Styles

# What's Your Learning Style? The Results

**Your Scores:**

- Auditory: 40%
- Visual: 35%
- Tactile: 25%

You are an **Auditory** learner! Check out the information below, or view all of the learning styles.

## Auditory

If you are an auditory learner, you learn by hearing and listening. You understand and remember things you have heard. You store information by the way it sounds, and you have an easier time understanding spoken instructions than written ones. You often learn by reading out loud because you have to hear it or speak it in order to know it.

As an auditory learner, you probably hum or talk to yourself or others if you become bored. People may think you are not paying attention, even though you may be hearing and understanding everything being said.

Here are some things that auditory learners like you can do to learn better.

- Sit where you can hear.
- Have your hearing checked on a regular basis.
- Use flashcards to learn new words; read them out loud.
- Read stories, assignments, or directions out loud.
- Record yourself spelling words and then listen to the recording.
- Have test questions read to you out loud.
- Study new material by reading it out loud.

Remember that you need to **hear** things, not just see things, in order to learn well.

[iii] Figure 3: Auditory learner result from learning styles test, with tips on how someone with this style can learn better (Educationplanner 2022).

## Test 3 – Big Five Personality Test
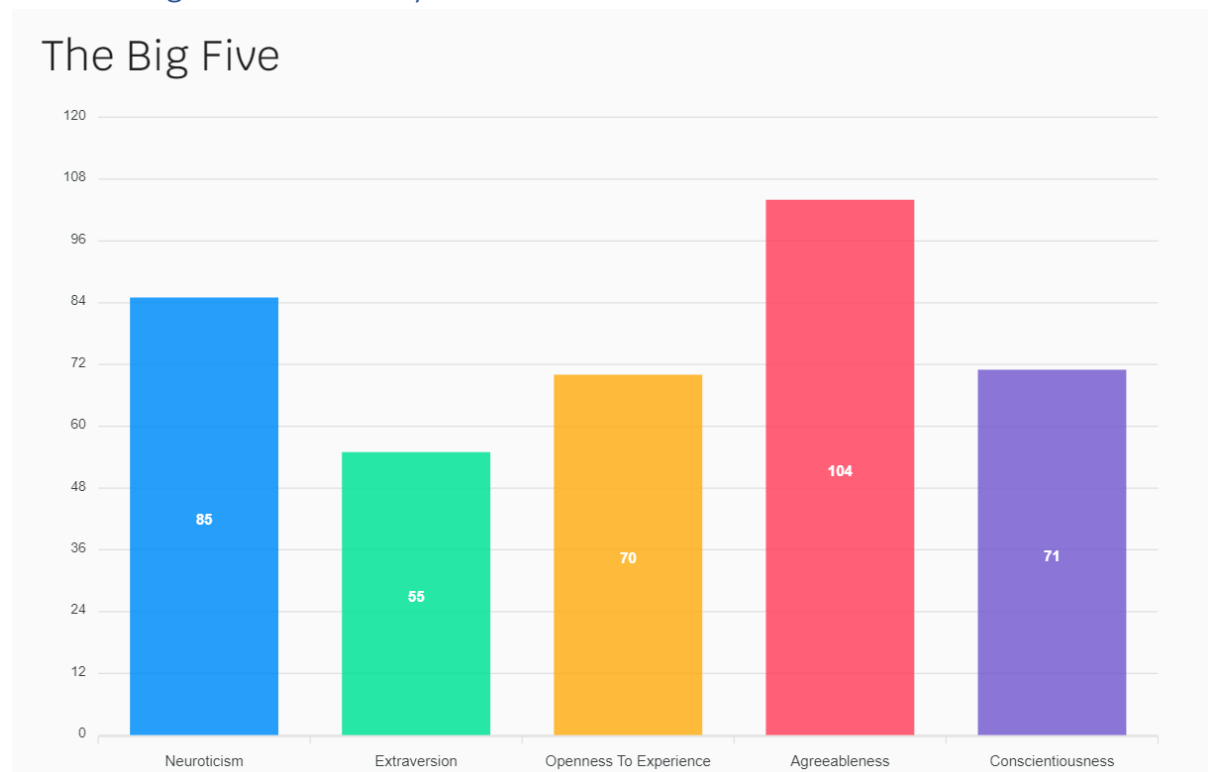


## The Big Five

A score of 85 in Neuroticism is considered high. Sub-categories include Anxiety, Anger, Depression, Self-Consciousness, Immoderation and Vulnerability.

A score of 55 in Extraversion is considered low. Sub-categories include Friendliness, Gregariousness, Assertiveness, Activity Level, Excitement-Seeking and Cheerfulness.

A score of 70 in Openness to Experience is considered low. Sub-categories include Imagination, Artistic Interests, Emotionality, Adventurousness, Intellect and Liberalism.

A score of 104 in Agreeableness is considered high. Sub-categories include Trust, Morality, Altruism, Cooperation, Modesty and Sympathy.

A score of 71 in Conscientiousness is considered low. Sub-categories include Self-Efficacy, Orderliness, Dutifulness, Achievement-Striving, Self-Discipline and Cautiousness.

## What do the results of these tests mean for you?

For the most part, I agree with the results of these 3 tests. After reading all 16 options, I feel that the ISFJ personality type most deeply resonates with me, especially the "defender" tag, as I am always looking after those that I care about before myself. I have always had an acute sense of hearing and the ability to regurgitate information I hear back with proficient accuracy, so I am not surprised to learn I'm an auditory learner either. In comparison to the other two, the "Big Five" test did not display all the results I was expecting. Most specifically with how high I scored on agreeableness. That gave my girlfriend and I quite the chuckle.

Personally though, I've always taken tests such as these with a grain of salt. Although they can provide some interesting insights into certain parts of your personality, or teach you a thing or two about yourself, I feel like people try and look too deeply into their meaning and try to shoehorn themselves into a box of "I am this" or "I am that" in their search for an identity or sense of belonging. I have always viewed people as diverse individuals. No two of us are exactly alike, and even though we can share many, if not all the same traits, we will still be completely different individuals, with our own unique life experiences. That is what makes us human, and that is what makes us all remarkable.

## How do you think these results may influence your behaviour in a team?

From these results, there are a few behaviours I will have to be careful of slipping into, but also some strengths that I will be able to bring to the table in a team environment. Low self-discipline is one of the biggest downfalls I have, which can be disastrous when in a group setting and people are relying on you. However, this should be countered by my strong altruistic desire of not wanting to let those in my team down. Being highly introverted, I may tend to stay in my shell and not reach out as much as I should. It does make me a great listener though, and I will always put a lot of thought into my responses and be empathetic with the ideas of those around me. Being quite agreeable, I should have an easy time getting along with my team members and going with the consensus. I'll just have to be mindful not to get too emotional and take things personally if things aren't going to plan or I don't agree with a change. If work isn't getting done though, I will pick up the slack and take on more than I should, which could be viewed as good or bad depending on who you ask.

## How should you take this into account when forming a team?

The biggest key factor in being successful when forming a team for me will be in maintaining strong communication throughout the process. Being a more auditory learner, verbal communications through meetings on software such as Teams, will be a great form of keeping in touch and up to date, as well as keeping me from being too introverted and staying in my shell. Frequent contact with my team members will also be the best way to keep me engaged and stop me from slacking off due to my poor self-discipline. Therefore, to get the best out of myself I should seek out a group with a highly organised, passionate leader, as I am quite hardworking when given clear direction and held accountable. If everyone in my team is unorganised and poor communicators, I may feel pressured into taking on too much work by myself.

# Project Idea

## Overview

With my ideal job being in game development, for my project I have chosen to create a game which combines elements of some of my favourite oldies, most specifically in the real time strategy (RTS) and action role-playing game (ARPG) genres. The idea is to create a game which plays and feels like an isometric dungeon crawler (Diablo-esque) game in terms of UI, character abilities, character progression, combat, enemy AI and control, but is structured similar to a competitive RTS/MOBA game, with heavy elements of resource gathering, city building, unit building/control, customization and replayability. Instead of having a permanent character you build up over time, games will be played in mostly medium/long matches where you start from scratch, with the focus being on player vs player while also maintaining strong player vs monster elements. The world will be set in a dungeons and dragons like fantasy setting, with appropriate race and class options available to the player. The idea is that each game is fast-paced and unique, to keep players engaged and coming back for more.

## Motivation

My motivation behind creating this project is to bring something that feels familiar enough to most but offers a new spin on two outdated genres which have been stagnant for quite some time and fits more in the current market of fast paced, action oriented, battle royale gameplay. Player vs player is something which has been dead in the ARPG isometric dungeon crawler genre pretty much since Diablo 2 in the early 2000s, and the RTS genre has become more and more niche over the years, with fewer players committed to playing long, complicated games, and many of its fans being from older generations. It's quite telling that the biggest games and releases in these genres today are rehashes of ones that are many years old (Diablo 2 Resurrected, Age of Empires 2 Definitive), and are still very much rooted in the mechanics of the early 2000s. With my project, I hope to attract a newer, younger generation of players and offer some innovation where it is desperately needed.

## Description

While the individual systems and technologies themselves aren't game changing, my goal is that by combining them in a new and innovative way, I can bring these elements together to create a successful game. The systems and gameplay are what is most going to set my game apart, so those are what I'll delve into here, with the first being the game world. My aim is that each game will feel different from the last, even if you make all the same choices, and the first step to achieving this is to have a procedurally generated map, with common reoccurring elements such as biomes, creatures and dungeons, set up in a slightly labyrinthine, difficulty scaling layout, to make it more challenging for players to simply rush each other and have the game end in a few minutes. Maps will come in various sizes and contain 2-4 players, either human or AI, starting them in opposite areas, with a base consisting of a main capitol, their chosen hero, a starting companion and the same basic resources and surroundings.

To manage controlling a hero in a diablo-esque ARPG style game, while also having elements of city building and defending, a clear system will need to be put in place to handle this. I intend for the camera to be an isometric view and the player to control their character in a point and click style with various key-bindings for their abilities. This should also be achievable with a controller for console compatibility, using the joystick to move around. There needs to be a way to detach your camera from your character to look around the map and to snap to your capitol building, which will control all your upgrading and unit building. Thus, the AI combat system will have to be proficient when you're not directly controlling your character, perhaps with options to fight, stay or patrol and a mini-map warning system that will help keep players informed. I foresee this being quite tricky to implement while still feeling smooth and fluent, so a lot of work will need to go into this system.

Races, classes, character talents and unit and companion choices are what will add deeper levels of customization to my game. My idea is that players will have a choice from many different races, ranging from the "good" races such as humans and elves to the "evil" ones such as orcs and undead. Each of these races will come with their own unique perks, units, upgrades and strategies. This may create a difficult issue with balancing, therefore the number of races and the power of their individual traits will need to be closely assessed. To make this balancing slightly less complex, classes and their abilities will be more streamlined and available to all races. Customization within these classes will come from two aspects, talent trees and items. For example, a player playing a mage might choose to focus on fire, or ice, or lightning magic, or a mixture of all of these. Each talent tree will provide greater power with the more you invest into it, as well as game changing or character defining abilities being found further into the trees. Points to spend in these will be limited based on experience gained killing players and monsters in the world.

The second form of class customization will come from the items you find and will play a huge part in defining your character. Basic items you find early on might provide simple stat boosts, or minor abilities such as a small heal on hit. More powerful items will be gated behind strong enemies and dungeons, located on the more outer reaches of the map and provide game-changing, build defining effects, such as new abilities or huge damage boosts. I intend for these most powerful items to be very much a risk vs reward choice for the player and require a considerable amount of time, experience and resources to go after, which may leave them vulnerable if their opponent prioritises other things.

Gameplay is where I hope my project offers a unique experience. The idea of the game is to traverse the map, collecting resources and leveling up by gaining experience killing monsters as you explore. Along the way you will also raid dungeons, which are side areas separate from the main map that vary in power, for items and resources. Once defeated, dungeons are captured and act as outposts to give you a tactical advantage in what you can see on the map.

Units come in different power levels and costs and have two purposes. You can set them to defend your capitol or assign them to raid a dungeon with or without your assistance. Companions are powerful race-themed units, each fitting a unique role such as healing, buffing or damage dealing, and having their own experience and upgradable abilities. They are attached to the player and can be lightly commanded, with a maximum limit of 3 in your

party. They can be interchanged and recruited, and can also be equipped with items, though fewer slots are available to them. There is a cap on the number of units you can have at once, and their deaths are permanent. However, players and companions will respawn at their capitol on death, with an incremental delay timer based on how many times they have died recently.

Your capitol is the base hub of your operation and consists of a main building, defence towers and walls depending on your upgrade status. All resources and items found from dungeons are stored here. It is also where you recruit new units and companions and make all your upgrades. The game is as much about offense as it is defence, as if your capitol falls to the enemy, you will be unable to create new units or respawn, meaning your next death is permanent. So, to win, you must defeat your enemy's capitol, and eliminate them from the map.

## Tools and Technologies

To create a game of this size and complexity, several tools and technologies will be needed in a variety of areas. Documentation, planning and worldbuilding are just as important as the engine, so a good workspace tool to brainstorm and take down ideas such as Nuclino or Obsidian will help keep things organised. As for engines, there are a few options that meet the criteria. For 2D or 3D, tools such as Unity, Unreal Engine or Godot could be used, with each having their pros and cons. Unreal might make prettier 3D games but is more complex and not as good with 2D as Unity is. However, Unreal has the added bonus of being free to use.

Character design, modelling and animation tools will be needed to create the games characters and bring them to life. These could include popular software such as Maya or 3ds Max from Autodesk, or a free open-source alternative in Blender. Photoshop could be used in creating other visual assets for the game. A source control tool will be useful to backup code and allow multiple people to work on the project simultaneously, while providing a history of changes. The industry standard for this is Perforce, though Git or Subversion would be suitable as well. As for technologies, a powerful computer will be needed as rendering models uses a lot of processing power. I would also want the game to be compatible with consoles as well as PC, so the relevant devkits and licences would be required for testing.

[v]List of various software used in game design (Nuclino 2022).

## Skills Required

There are a lot of skills, and often teamwork required when it comes to creating a successful game. C++ and C# are the most used programming languages in game development, so a strong knowledge of these will be needed to code the many different aspects of the game. This requires a large amount of problem solving and creativity, as you are bound to run into hurdles trying to meet the game design criteria. A strong analytical mind and foundation in mathematics will also be needed to finely balance the various mechanics and systems in the game. Artistic ability will be needed in creating the models for the game, as will experience using modelling and image editing software. In terms of feasibility, some of the elements, such as planning, character design and worldbuilding, will most definitely be achievable by

first year students. However, the more technical aspects such as programming would most likely need to be outsourced, or better investigated further down the line.

[vi] Video game developer skillset (Eastern College Inc. 2022).

## Outcome

For me, a successful outcome will be a game that not only runs well but is enjoyed by those who play it. My goal is that it attracts a new kind of player base to the genre, though even if it doesn't take off, I hope it provides what is becoming a niche community something fresh and exciting to dig their claws into and perhaps spurs other developers into creating new innovative ideas in the genre.

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[ii] *Strengths & Weaknesses | Defender (ISFJ) personality* (2022), 16Personalities website, accessed 15 December 2022. https://www.16personalities.com/isfj-strengths-and-weaknesses

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[iv] *My results from the Big Five personality test* (2022), Big-five-test website, accessed 17 December 2022. https://bigfive-test.com/result/639db1095f9138000843ea60

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[vi] *Skills Needed to Be a Game Developer | Eastern College* (2022), Easterncollege website, accessed 17 December 2022. https://www.easterncollege.ca/blog/skills-needed-to-be-a-game-developer/