

# **Assignment 1**

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Github repository: <https://github.com/Tomjudd90/assignment1>

## **Personal profile:**

Hi there, my name is Thomas Judd, welcome to my profile. I am 30 years old and have lived in Melbourne my whole life. I went to high school at Caulfield Grammar and graduated in 2008. Since then, I have travelled a lot, worked in many different fields and most recently completed 2 years of electrical engineering before changing my degree to Information Technology at RMIT. Have had a fascination on computers and everything related for the better part of the past 20 years. I built my first gaming PC at 13 in 2003 and have been ever since. The main attraction for me has been the problem solving involved in everything related from the build of the PC, to setting it up with operating system and drivers and then of course gaming.

I have always had a fascination in the intricacies of computer programming, constantly speculating, trying to logically explain how programs operate and how programming languages facilitate this. Now I want to learn how it actually works! Due to this, I decided to pursue further education in the field of Information Technology in the hopes of further understanding computer programming. RMIT was an easy choice of institution for me as I have friends who have attended this university doing various courses from a Masters in Architecture to Computer Science and all advocate the institution and have gone onto to successful and fulfilling careers.

## **IDEAL JOB:**

With the skills I acquire throughout my time at RMIT I hope to become a software engineer, which entails the construction of software both front end and back end, network systems construction and management, game development and much more. Having completed 2 years of an electrical engineering degree, I developed a good understanding of the essence of engineering and what it requires to be a professional in that field. As I stated earlier, the problem-solving nature of working with computers is a big attraction for me, and my time doing engineering helped develop those skills. I believe the skills I obtained translate very well over to I.T and any other related studies I may pursue.

<https://www.seek.com.au/job/51777868?type=standard#searchRequestToken=72322602-7bce-48fb-9816-d5dcb912a228>

Particularly, I want a job as a game software engineer. Having had a passion for gaming for over 20 years now, I've been able to observe and appreciate the many aspects of game development. This role requires skills in various languages including C# which I is a general-purpose programming tool which I hope to obtain throughout my further studies. It also requires understanding of the user interface design process. I will learn some of these skills in my User-Centred Design subject this year and more throughout my course. This job requires extensive experience in Unity 3D which I have very basic knowledge of. Through online resources I will be able to extensively teach myself the fundamentals of the program and more so that I have the required knowledge and experience. Also, strong math and physics skills, which I have developed in my time doing engineering and hope to

continue with in my own time. This course may require further studies beyond an I.T degree which I am willing to pursue.

## PERSONALITY TEST

### MYERS-BRIGGS: ISTP-A / ISTP-T

This personality type is a hands-on, inquisitive type basing a lot of their life on rationale and logic. Exploring and creating through trial and error. They enjoy helping others with projects or accepting help from others for their own projects and forming a collaboration. ISTP-T are fairly relaxed and laidback often overstepping the boundaries of others. If I were to use this personality assessment to form a group, it would require me getting to know the candidates before becoming team members. It would require others with a similar sense of humour, be able to deal with unpredictability and be open for a hands-on freer flowing approach. This personality type could become an issue in group scenarios by ignoring ideas they deem not worthy. They can also be insensitive to others feelings by talking or acting without thinking. They struggle with long term commitments, so could become bored during a long group assignment.

### LEARNING STYLE TEST: AUDITORY

This learning style relies on saying things out loud and hearing things. Having people speak instructions is the way they are most likely to absorb said instructions. This could become an issue in a group scenario particularly if it is online and a lot of the work is being sent between each other in text. It would result in a lack of understanding of the group work. When choosing a group, I would be sure to select people with good personal communication skills. The ability to audibly express anything they need to.

VIA CHARACTER STRENGTHS SURVEY: 1. Fairness (justice) 2. Social intelligence (humanity) 3. Kindness (humanity) 4. Humility (temperance) 5. Humour (transcendence)

These character strengths show a strong ability to work well in a group environment. Fairness shows that this type of person will approach everyone in the group the same way and everyone will have the same opportunity regardless of any personal feelings. Social intelligence allows someone to read the feelings of other around them.

## Project

### Overview:

For my project I am going to design and create an electric drum. The drum will be programmable via Bluetooth to a device with the required application installed. In this application, the sounds the drum will output can be changed and manipulated by the user on an application.

### Motivation:

I've been drumming for the last 15 years, during that time I've had many different financial circumstance and many different living arrangements. Due to these varying circumstances, there have been times I have not been able to play my large 10 piece acoustic drum kit. So obviously I should buy an electric drum kit to fulfill my desires. Being a student, I cannot afford a new electronic drumkit. This is the situation for many aspiring drummers.

Having constant rhythm ideas and no way to transpose them, has motivated this project. Now drummers who want to pursue their passion are able to do so without the burden of logistics and money.

**Description:**

The drum is going to resemble the shape of a typical snare drum. It will be responsive to standard acoustic drum sticks and touch, and the pad will be pressure sensitive to give it an authentic feel and experience. The pressure pads will allow the user to hit with accents.

The accompanying application will allow the user many different features and functions.

- The ability to choose sounds from a library of provided drum and other percussion sounds.
- It will also allow user to upload their own sound files.
- There will be a record option, allowing the user to record sounds on the go and instantly upload them to the drum.
- A live looping function will also be available.

**Tools:**

Drum:

- Piezoelectric pressure sensors
- Mesh drum head
- Dual-zone pads
- Electronic drum module (drum brain)
- Typical drumkit form factor
- Bluetooth receiver
- Battery pack

Application:

- Laptop/tablet/phone
- Buildfire.js app builder

**REFERENCES**

Scrimba.com

w3schools.com