# Intro to IT assignment 1

### Artem Chesnokov s3722286

## 

>>Personal Information

Hello there, I'm Artem Chesnokov S3722286 You can contact me at artyomchesnokov@gmail.com

I was born in Russian Federation back in 1999. In 2008 I have immigrated to Australia with my family. Since then I've graduated from Werribee Secondary College last year and am currently studying at RMIT to become a bachelor of Information Technology. I speak both Russian and English fluently. I also have a whopping 540 hours on the Pyro class in Team Fortress 2 and have led a competitive team for nearly two years.

## >>Interest in IT

My interest in IT is based mostly on a desire to be able to use the tools technology provides, instead of having to rely on subpar implementations made by someone else I would like to make my own.

I've always been around technology but my interest in IT started when I was building a PC. At somepoint when making part lists I wondered "How does any of this hardware work?". Previously I did messed around with basic modding and I've created a custom script or two for TF2.

I chose to study at RMIT because it was one of the best universities for more technical subjects while also being the closest one so it was simplty the perfect uni

I expect to learn how to program on an intermediate level. I also expect to learn the fundamentals of how computer hardware works

## >>Ideal Job

[-Advertisement link-](https://www.seek.com.au/job/35831960?type=standard&userqueryid=aeb5109edbfc379e2a97d0dd748fd81f-2449320) [-Archived link-](http://archive.is/EnaU7)

This postition involves designing, rolling out and maintaining infastructure for government and defencive agencies, this position is attractive due to working for a more meaningful cause than just pure private profit.

This position will requre a large skill set including Configuration management, database archetectures, systems administration, storage administration, deployment methods and deployment technologies. Both qualifications and expirience requred will be very high grade most likely having several years if not decades of expirience in database management, infastructure management and technologies.

As of right now I do not have any of the skills, qualifications or expirience to apply for that job. I have some basic knowledge of Java and basic skills at programming in the language but that is of course not enough.

In order to apply for that job I would need to firstly finish my degree at RMIT. Afterwards I would need to get expirience and skills by working in an entry level job preferrably on infastructure management in a smaller company, eventually I would look for more prestigious jobs focused on infastructure and database management for larger companies until I get enough expirience and qualifications to apply for that position.

## >>Personal Profile

#### -Myers-Briggs test result: INJT

#### -Learner style test result: Visual learner

#### -Big 5 personality test result: Openness:83% Conscientiousness: 50% Extraversion: 35% Agreeableness: 67% Neuroticism: 60%

The results of these tests imply that I am introverted, a visual learner, rather open and agreeable which I find accurate. This means that I would be more suited for a smaller group which focuses on practical tasks while I would be suitable to work with more conflicting personalities.

These results would imply that I would be less sociable, I would benefit more by presentations rather than meetings and that I would be more mediative and openminded with my teammates.

Assuming these results are infallable I would try to find a smaller team as I'm more introverted. I would prefer to work in a group that works on more hands on tasks while using more presentations instead of meetings. I would seek a more openminded team while not being worried about having too many clashes with others as I could adapt to overcome them.

## >>Project Ideas: Smart Home Tracking system

#### -Overview:

My project idea is to impliment a shortranged/home tracking system for commercial use. It will use a combination of rfid chips and sensors to create a tracking system. A customisable and friendly ui will be provided to the end user to configure for their home/building.

#### -Motivation:

This project aims to fill a hole in the tracking market, currently consumers do have access to either short ranged non directional bluetooth trackers or inprecise and expencive GPS trackers that cannot properly help the consumer find their items within a household. This project will allow a consumer to easily find in what room their rfid tagged items are in and even potentially allow tracking their movement throughout the house. This would be especially useful for tracking where their pets are or where their wallet or keys are.

#### -Description:

This project will use rfid tags alongside small wifi capable rfid sensors. A mobile app or proproitary remote/display will be requred for the end user to set up and use the system. RFid sensors will be deployed in an airlock configuration with some overlap. Two rfid sensors in an airlock configuration will be provided as a single unit and will be used to determine if the tracked objects have been taken out or into the room. A central hub or node will be requred to process the signals from each sensor. The project will be modular allowing a large amount of sensors to be connected to a single control node. An user interface will be requred to setup each sensor and their locations in the household. Each sensor should be placed in a doorway or other entrance, when an RFid tag is detected by the sensor array it will signal that the object moved into the other room. Two sensors overlap to make sure that the object did not simply stay at the door way and then went back into the room. If that happens both sensors will detect the object and deduce that it is standing in the doorway, when it goes back inside the room only one sensor will detect the object before it disappears which will allow the system to deduce that the object did not leave the room. A central node will process the objects being tracked by the airlocked sensors and keep a tab on the room they are currently in. The rooms will have to be setup by the end user and the system will be accessed via an app, display or even a home assistant.

#### -Tools and Technologies:

Passive RFid tags, precise wireless RFid sensors, somekind of raspberry pi central node/hub,display/mobile app will be requred for the end product to function. The central node/hub will need to be powered by a large amount of code which then would need to be passed to the UI, mobile APP or home assistant so the user can interface with it.

#### -Skills Required:

iOS/android app development, intermediate programming knowledge and skills assembling hardware will be requred to successfully build the project into a working state. The skills requred are rather general and would not be that difficult to find, however finding appropriate hardware especially batteries, wifi capable chips and RFid sensors that can be small and cheap enough to be viable will be difficult to find not to mention source a large quantity of.

#### -Outcome:

If the project is successful then consumers will have access to a home tracking system which allows the user to quickly deduce the general location of the tracked items within a household. Currently bluetooth trackers cannot easily show the consumer what direction the items are while GPS trackers will not be accurate enough to be useful in a household. The project will provide a directional and locational tracking for a nearly limitless amount of items across nearly limitless amount of rooms/spaces. This project would further push the idea of a smart home by adding another feature that will be useful to consumers.

## So that's it

I'm an undegraduate student working towards an Information Technology degree to further my own interest in IT

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