

---

## Intro To IT: ASSIGNMENT 1

**Your ideal job** <https://hrmos.co/pages/teamlab/jobs/cr0000081>

### **Personal Information**

My name is Angela Hoang. I am Vietnamese Australian and I am a Computer and Network Engineer based in Melbourne, Australia.

I have a passion for art and science and I love to program.

Education: Nazareth College High School (2016 Graduate)

RMIT: Bachelors of Engineering (Computer and Network Engineering)

Fun fact: My favourite dessert is Japanese Cheesecake!

Student number: s3661245

Email address: s3661245@student.rmit.edu.au

### **Interest in IT**

#### **What is your interest in IT?**

The advancement in technology in this period of time sparks my interest in IT, as it creates many opportunities for individuals like me to experience and be involved in innovative technology that can benefit everyone globally in their everyday lives.

#### **When did your interest in IT start?**

#### **Was there a particular event or person that sparked your interest?**

I encountered different types of challenges when I was learning the subject Information Technology during my high school studies. I enjoyed creating websites and playing around with different computer applications, which sparked my interest in wanting to learn and develop my own computer or mobile application.

#### **Outline your IT experience (if any)**

I have experienced in programming in the languages C++, Java and MATLAB for assessments during my course at RMIT.

#### **Why did you choose to come to RMIT?**

I chose to study at RMIT, since the course program seemed to fit my preference. The course outline for other universities were either too complicated or that the location was too inconvenient for me to travel to. The location of RMIT was also one of the reasons why I chose to study at RMIT, as it is within the Melbourne CBD, which is easy to commute to.

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

I expect to learn what future employers look for in employees within my field of study, such as technical skills as well as interpersonal skills that will benefit and fit the company's standards.

## **Ideal Job**

### **AN INTERACTIVE PROGRAMMER**

A programmer that architects and create any interactive content, including any real-time graphics. This position appeals to me, as it involves both creative and technical skills within programming. The mix of creative art and science sparks my interest, since I have a great passion in design as well as in maths and science.

The skills required include many programming languages and design applications such as:

Unity3D / UnrealEngine  
OpenGL / Direct X / WebGL  
Processing / Opening Frameworks / Cinder  
vvvv, TouchDesigner  
Cinema4D / Houdini  
Photoshop / Illustrator

I currently have the basic skills for Photoshop and Illustrator, since I studied Visual Communication Design during my years in high school.

I also have coding experience from assessments during my studies at RMIT, such as MATLAB, C++ and Java. I have also learnt the culture of Japan and basic level of Japanese during my high school experience, and I enjoyed every moment of it. I even travelled to Japan with a group of friends for a student exchange program. I created so many happy memories and met so many incredible people.

My plan on how to obtain these skills is to work on personal projects that I will propose myself or complete any requests from friends, so that I can build up the required skills that are needed for the job position. I can either research for projects or ask friends for any projects that could benefit them. I will also strengthen my Japanese language so I that could communicate with the company easily.

## **1. Interactive Programmer**



### **Responsibilities**

- Create Interactive contents
- Architect and development of interactive contents
- Architect and development of real-time graphics

### **Required experience, skill**

- Experience in programming your own projects
- Unity 3D / UnrealEngine
- OpenGL / DirectX / WebGL
- Processing / openFrameworks / Cinder
- vvvv, TouchDesigner
- Photoshop, Illustrator
- Cinema4D, Houdini
- Experienced in architect and development of interactive contents.

### **Desirable experiences and skills**

- Positive attitude toward understanding Japanese (Hopefully, conversational level)
- Experience in project of creating interactive digital arts.
- Future vision of becoming our full-time employee. (Due to preventing the technical leakage)

## **PROFILE**

### **ISFJ - Myers Briggs test**

The results show that I am the “Defender”, and I understand why, since I do have analytical abilities and reserved around people. Being an introvert reflects me, since I do keep feelings and thoughts to myself most of the time, however that is usually out of respect and considerate of other people’s emotions.

"The Defender" role brings out good practical skills which will influence my observant and hard-working behaviour when working with a team. Providing good service and dedication is one of the main priorities when working within a team, and this could effectively drive the motivation and work ethic of a team.

My patience and supportive traits will allow me to be more open and supportive to new ideas from other team members. Being enthusiastic towards each member will allow others to see the trust and support that I am giving when I am forming a team. Being observant to each members’ ideas will allow me to understand and be more respectful with their plans.

<http://www.educationplanner.org/students/self-assessments/learning-styles-quiz.shtml>

Auditory: 30%

Visual: 60%

Tactile: 10%

### **Visual**

The result for the learning style test was predictable for me, since I sensed that I am a Visual Learner. My organisational skills help me stay focused and on track with my messy lifestyle. Being a visual learner has helped me throughout my studies, and it is certain that I will remain like this for the rest of my life.

My colour coding and brainstorming with everything helps me keep organised with important tasks. Visualising the purpose of projects will allow me to learn and completely understand what jobs are needed to be completed. Using mind maps will allow my thinking to activate and create new ideas better, which will influence my contribution when working in a team.

When forming a team, being a visual learner will allow the team to keep things on track as well as meeting up with scheduled deadlines. Attention to detail is another characteristic that visual learners have, hence, being attentive to others will also be taken into account when forming a team.

### **Enneagram Type 2 - The Helper**

I also understand why I am categorised as “The Helper”, since I do enjoy assisting others whenever they are in need of support or aid. Being friendly, generous and self-sacrificing is one of my strengths, since I do sacrifice many things for the benefit of other people.

“The Helper” role will allow me to ‘go the extra mile’ to help out a co-worker or friend in need, since the characteristic of selflessness is part this personality trait. Being socially aware of other people’s emotions and comfort will allow me to understand plan how to approach others about work or other matters.

Encouragement is very important when forming a team, since all team members are important and are contributing towards the project goals. Everyone’s efforts in the team is essential, and it should be appreciated. Having a healthy and positive relationship with the other team members will reduce any sort of conflict, and gain more considerable and empathy within the team.

## **Project Ideas**

A computer, tablet or mobile application where young children can learn and interact with the planets of the solar system through the art and music in game format. This can influence children to spark great interest in science and life outside of our planet Earth. Children can learn the interesting facts and relative terminology involved in astronomy and science, as well as influential historical people who were part of this remarkable field of study such as Albert Einstein, Steven Hawking and many more. Younger children could also have fun watching and interacting with puzzles and games about the shapes and facts of planets within the educational application.

The project will be useful, as it is an application for educational purposes. The application will altogether prompt the children to use all learning styles; visual, listening and kinaesthetic. This will allow help any child to learn about science easily, and get themselves more excited about learning. Allowing young children to learn about science at a young age will allow their fascination and interest to prolong as they grow older, and possibly inspire them to be part of the science field in their future. Young children who can learn about influential individuals will also inspire themselves the possibilities the future can present to them with the love for science.

There would be different age categories within the application, since this educational application should be at the appropriate reading level for the user. The desirable age range for the target audience is between the ages of four to eighteen.

Easy achievable challenges that reward the user with the application's fictional currency can allow users to purchase customisable items to decorate their own avatar character for user's profiles. A leaderboard scoreboard system can also be featured within the application so that users can keep track with their friends' learning journey within the application. Social features such as visiting other user's profiles as well as gifting small items will also be possible.

Users will be able to learn the sun and planets involved within the Solar System. Fun animated videos will stream what the Solar System consists of, as well as the relative terminology and facts that would be interesting for the appropriate age of the user. Miniature games after the video streaming can also entertain and help the younger children revise and reflect what they just watched. Famous scientists such as Albert Einstein will be one of main 'host' of the application where he will guide new users to where which feature is within a tutorial mode. Other historical famous individuals involved in the field of astronomy and physics will be implemented as well, where users can 'unlock' new host characters and learn fun facts about how these influential people are important within the field of science. Some other fun small game ideas are some creative games as well, such as creating comets, simulations of living on the moon and designing a spaceship. Besides the Solar System and famed scientists, users are also given the opportunity to watch videos of historical events such as the Mars Rover, Shuttle Launch as well as the Moon Landing.

Quizzes that are implemented in the game will have multiple choice questions, where users who have enough points will be allowed to learn further education material. For younger children, naming planets and identifying famous individuals will be one of the simplest level in the quizzes. Older users will be quizzed on the facts they would have learnt from the video streams as well as the information given about influential individuals. Users will earn points that can be used to purchase in-store customisable items for user characters. Once the user has the minimum amount of correctly answered questions, users will be able to move on and learn more advanced topics as well as gain points. Parents of the typical users will also have the ability to view the results of the statistical data that has been collected and calculated from the quizzes. Parents are also allowed to share any achievements attained from the quizzed questions accomplished by the

game user onto any platform of social media, mainly Facebook, Instagram and Twitter. If any of the older users have any scientific questions, users are permitted to submit any types of queries that the content within the application has not answered. Parents also has the option to send feedback by writing reviews or answering quick survey questions to allow any improvements towards the application.

The software required that will be involved in this project will be computer applications that allow game design, such as Unity3D. A software like this will allow the game application to be either in the format of 2D or 3D, as well allow the game to be compatible on multiple mobile, tablet or desktop devices. Another software program that will be needed are involve creative design, such as Adobe Photoshop or Illustrator, so that the concept designs can be digitalised and then finalised onto a program that involves graphics for the application. Programs such as “Sketch” will also be useful, as it can program and edit the layouts within the game application. Hardware such as a digital tablet (WACOM Cintiq Pro) would be one easy tool that can assist designers for the digital graphics.

The skills that will be required for this project will definitely prefer team members to have coding experience, such as for languages C++, or languages for compatible with Apple products such as the Swift Programming Algorithm. It is also desirable for creative design skills, such as using Adobe Photoshop, Illustrator for the graphics as well as “Sketch” for the User Interface. A recommended hardware that is beyond the standard laptop would be a drawing pad tablet, such as the Wacom Cintiq, so that designers have a better surface to design their projects. The hardware would be easily accessible, and the skills within the software systems will start to build up and become stronger with more practice and motivation.

The earlier the children are exposed to science, their interest may inspire them to contribute to the STEM field. “Girls’ interest in STEM peaks in middle school, but drops off in high school.” From a Microsoft survey managed in Europe, it was brought to attention that young girls gain much interest in the STEM field at the age of eleven, however, they start to lose that interest at the age of fifteen. It was proposed that the factors of social influence and lack of access is partially responsible. With this application, it will influence young children, especially girls to extend their interest in STEM longer in their lifetime.

<sup>1</sup> <https://blogs.microsoft.com/firehose/2017/03/01/microsoft-study-in-europe-reveals-when-and-why-girls-interest-in-stem-fields-begins-to-wane/>