**Assessment 1 Report**

Introduction to IT, 2021 (*Study Period 3*)

**By: John Mufunda**

Github Repository:

<https://github.com/TheRealJohn-M/COSC2196-IIT.git>

Github Pages:

https://therealjohn-m.github.io/COSC2196-IIT/

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**Personal Information:**



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**Languages Spoken:** English, Shona

**Education to date:**

**-** Completed High School (2018),

**-** Curtin University (2019-2021).

**-** RMIT (2021)

**About Me:**

Hello! I'm John Mufunda, a university student at RMIT from Perth, WA. I would describe myself as a multifaceted person with many interests but also participate in many of them, these interests being; Sports, Music, Food, Computers, Gaming and Art (photography). I'm someone who is open to trying different things and experiencing all that the world has to offer, including sharing those experiences with family, friends or even people I meet who also engage in the same interests. My interesting fact would be that I am a photographer and this is one of my creative outlets and with the support of friends and family I've been able to capture cool moments and express myself creatively from personal to semi professional projects.

**Interest in IT:**

**What is your interest in IT?**

My interest in IT extends to both hardware and software, encompassing computers, smartphones or gaming. I find interest in how these technologies change and innovate, but how they allow the user to exercise their creativity, individuality or allows them to help others through these different devices. Having additional interest in art and photography I want to explore further how these fields interweave and are able to enhance each other, as I believe technology allows for art to evolve and expands the ways we are able to express ourselves, just as a painter’s creative expression is through painting, a programmer’s creative expression is through coding. The fusion of art and technology is something I endeavour to continue to uncover and see how I am able to impact these two fields for myself, family & friends, community or possibly globally.

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

My interest began at a very young age (~7yo) when my Dad got our first home computer or when my brother got his first phone, the former a ‘Compaq’ system which ran Windows XP and the latter being a ‘Sony Ericsson’ TM series flip phone. At that age these devices seemed magical to me and it quickly became my favourite thing to explore the different applications and features which were possible on the different devices as there seemed to be limitless possibilities of what they could do.

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

This interest could not be fostered without the support and interest in computers from my Dad and older brothers who I watched use technology growing up. From complex work related programs which my dad used or gaming with my brothers I was enthralled with what could be done on a computer that it became the hub which all my other interests intersected. From downloading and listening to music, viewing images captured from the family camera, playing games like the pinball game ‘3D Space Cadet’, ‘Age of Empires 2’ or ‘Halo 2’ for hours on end, these activities only being the tip of the iceberg. From there my interest not only deepened as my age increased but widened, moving from computers to mobile phones. The rate at which innovation and improvement happened was so rapid in the space, with different companies employing different technologies and gimmicks into their devices and expanding what smartphones were through both software and hardware. This field was amazing to witness as no one company had dominance (unlike in current times with the Iphone or Galaxy series phones) so the space was ripe with creativity and change, all this in an attempt to figure out how to make the best possible device and push the envelope with what a phone could achieve, look like and its accessibility to more people.

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

Aside from personal tinkering/inquiry into IT and how the technology I use works, I have no formal training nor experience in the field and this course is my gateway into the field and will provide the experience and knowledge to further my journey in this field and chosen career.

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

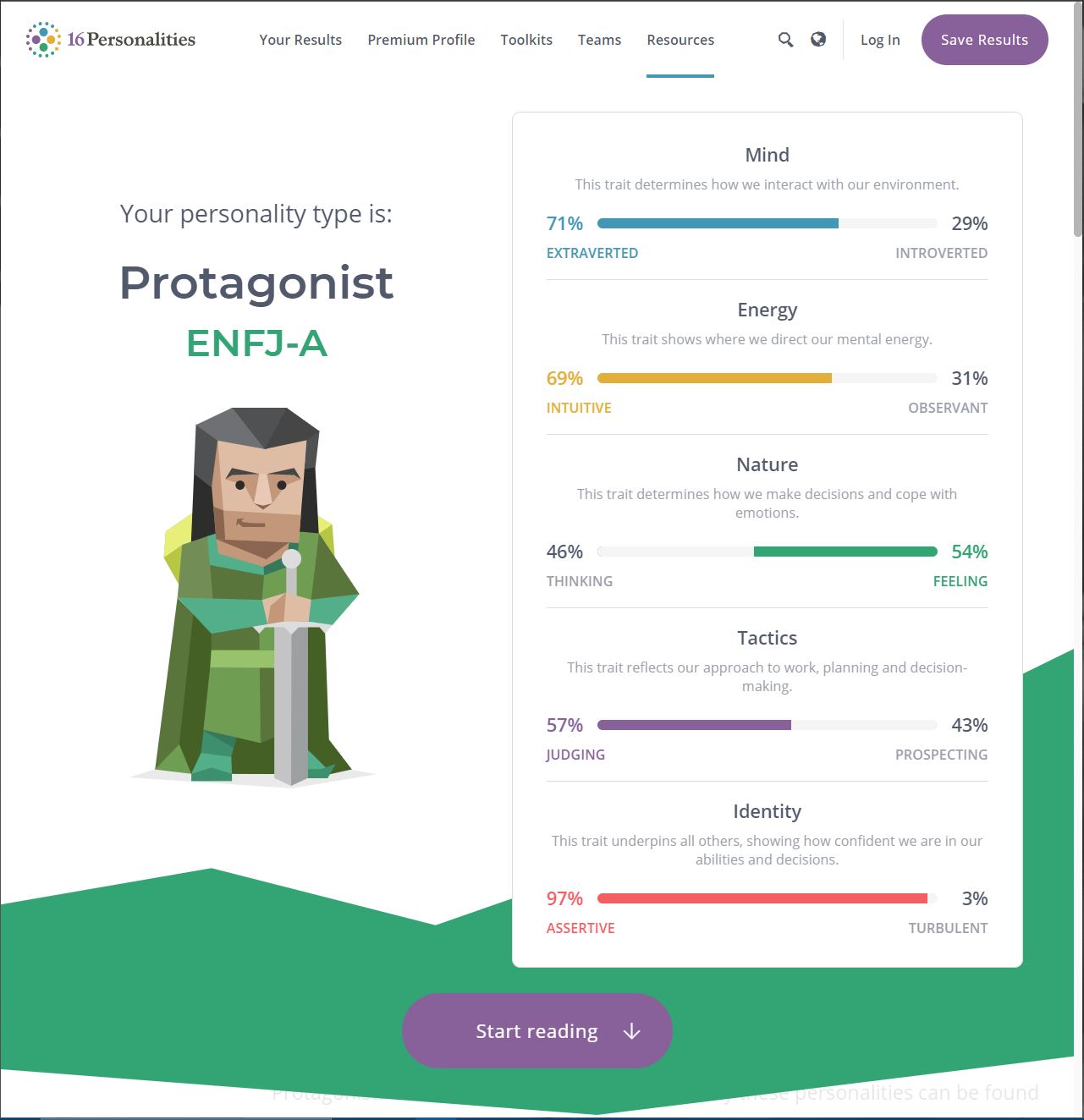
After studying a BSc., Health Science for 2 years I found myself enjoying learning the content but unable to see myself enjoying a career in the field, I noticed that in the health industry specialisation is very critical (similar in most industries) however, to really have a certified career you have to stay in one field and the possibility to change to another field is possible but be very difficult regarding transferable skill, more so if you have in depth expertise or plenty of experience. IT however, was similar yet different, with specialisation also being possible but the degree to which transferable skills learned in one section of the field could be used in another almost seamlessly and this really appealed to me. Not that I need to change careers frequently but to stave off burn-out in a particular career, being able to change and still have the experience and expertise be relevant and more than likely enhance the new career or position is an option I wanted to have. RMIT was the perfect place to be able to kickstart this change as I had an interest in technology already and RMIT specifically because of the recommendation from friends and family I attained prior to enrolling. They always referenced and praised the university in its quality of education but also the support and assistance it provides to its students in their journey and this basically sold me as I was nervous in changing courses and medium of learning with-it being online however I don't regret my decision one bit.

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

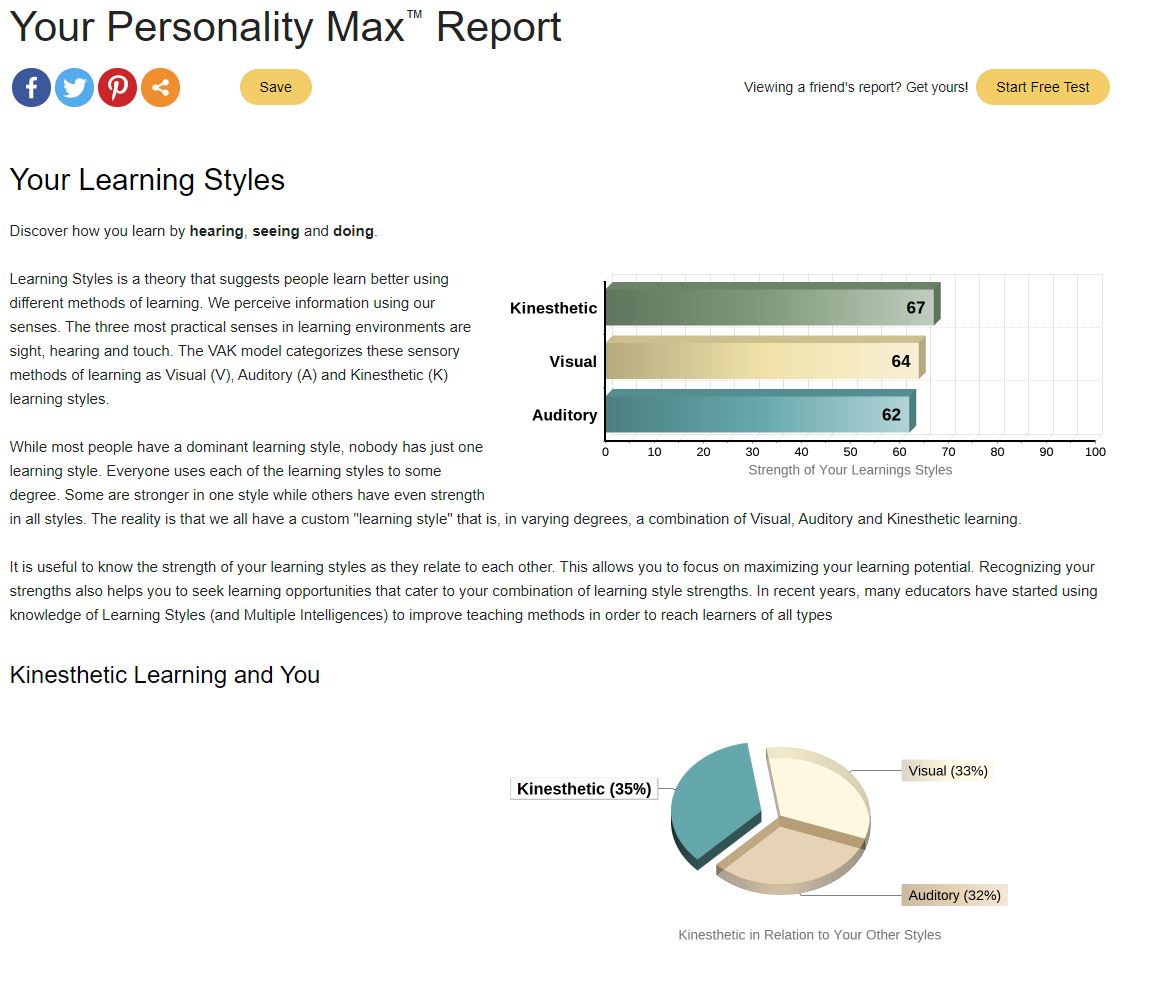
During my studies I expect to deepen my understanding of the technologies which are a part of our everyday lives. What I strive to achieve during my time is being able to have a foundation which can propel me into a career but also knowing what type of career which I’d like to pursuit, this possible with the plethora of new skills which I’ll be learning and would readily be able to employ in a job be it entry level or personal projects. I’m excited to explore the different avenues which this course will provide for me and learn of the different variants in careers which are possible through IT and how they all work together in the creation, innovation or enhancements of different products or services.

**Personal Profile:**

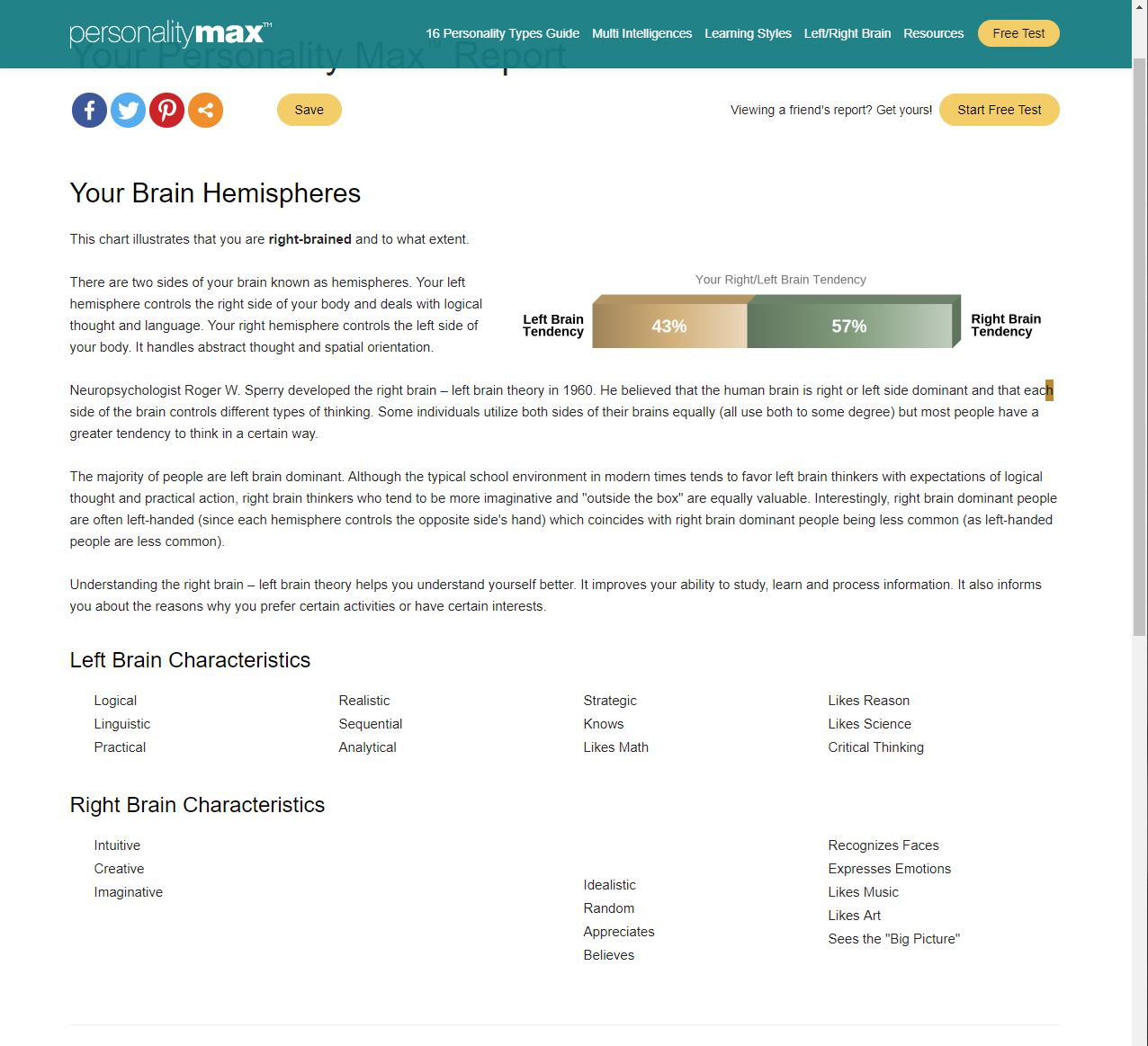
- The results of online Myers-Briggs test from ‘16 Personalities: Personality Test’ :



- The results of the online learning style test from ‘Personalitymax: Learning styles Test’:



- The results of the last online test is from ‘Personalitymax: Left/Right Brain Dominance Test’:



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

After completing the 3 different tests it was interesting and beneficial finding more about myself in discovering my personality type, learning style and which brain dominance I was. Though I understand that these are not exactly scientific tests and have a degree of generalisation to them, being able to understand who I am through these tests will help me cater my learning style as well as understand my behaviour and why I may do or react in certain ways or not.

Beginning with the Myers-Briggs test from the ‘16 Personalities’ website I learned that I was an ‘ENFJ’ personality type called the “Protagonist”. ENFJ personality types are characterised by the ‘extravert’, ‘intuitive’, ‘feeling’ and ‘judging’ personality traits, ENFJ’s tend to be forthright, altruistic and charismatic, in addition to holding strong ideas and values, being receptive, love helping others and strive to achieve their very best when they set goals, or when others set goals. (16 Personalities, 2021). Reading the report which was given about ENFJ personality types I found myself thinking “This accurately describes me” and though may not have as much of an inclination to some traits there still is a part of me which identifies with them, such as being ‘overly idealistic’ or ‘overly empathetic’. The benefit I’ve gained from this test was more behavioural, being able to now understand a little better why I may act and react certain ways, being able to be attributed to my personality type and with this I'm able to keep myself accountable as an individual but also when interacting with other people.

The second and third tests I completed were from ‘Personalities Max’, those being the learning styles test and the left/right brain dominance test. These two tests helped me understand what my learning style and which side of my brain was dominant but also how these two intertwined. The result from the learning styles test was that I'm quite balanced but lean more to a kinesthetic learning style, which is very practical and involved, requiring me to be shown how to do an activity or skill and then attempting it myself in order to understand how and or why something works. This was closely followed by visual making sense as diagrams and illustrations are just as useful and allow me to create a mental image of how a structure or object looks or functions which is closely tied to being a more ‘Right’ brain dominant individual, this tying to the imaginative and creative traits associated with being right brain dominant. Having gotten the results from these tests it's great to further understand myself, my behaviours and how my learning style is interlinked with my brain dominance type. This information will not only be helpful personally but also in my learning journey during university, but also in a social capacity and in my future career.

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

Aside from the personal benefit I’ve gained from these tests, the results will help me in social or group learning environments as I’ll be better able to understand other people how they function and enable better learning practices and improved collaboration as we will be able to better tailor each others needs, for example; A group member might be a visual learner thus, will benefit from illustrations and diagrams than paragraphs of information, whilst another might be auditory learner and voice memos, meetings and conferences where they are able to have information dictated to them or be in a space which fosters discussion will benefit them compared to diagrams or written information. Another example may be in the from of through knowing a person's brain dominance, hypothetically you're able to give them the ability to compete tasks or portions of assignments which they would be passionate about, more inclined to learn or will provide the best results for, so giving a more ‘Right Brain dominant’ person the task of creating the user interface or graphics will be closer tied to their interests compared to having them be the programer and code. Not saying this person can't do this but the ability for different people to collaborate though means which they will be most efficient and passionate about will increase the quality of the project, the speed in which the project can be done and also the overall work environment during the project.

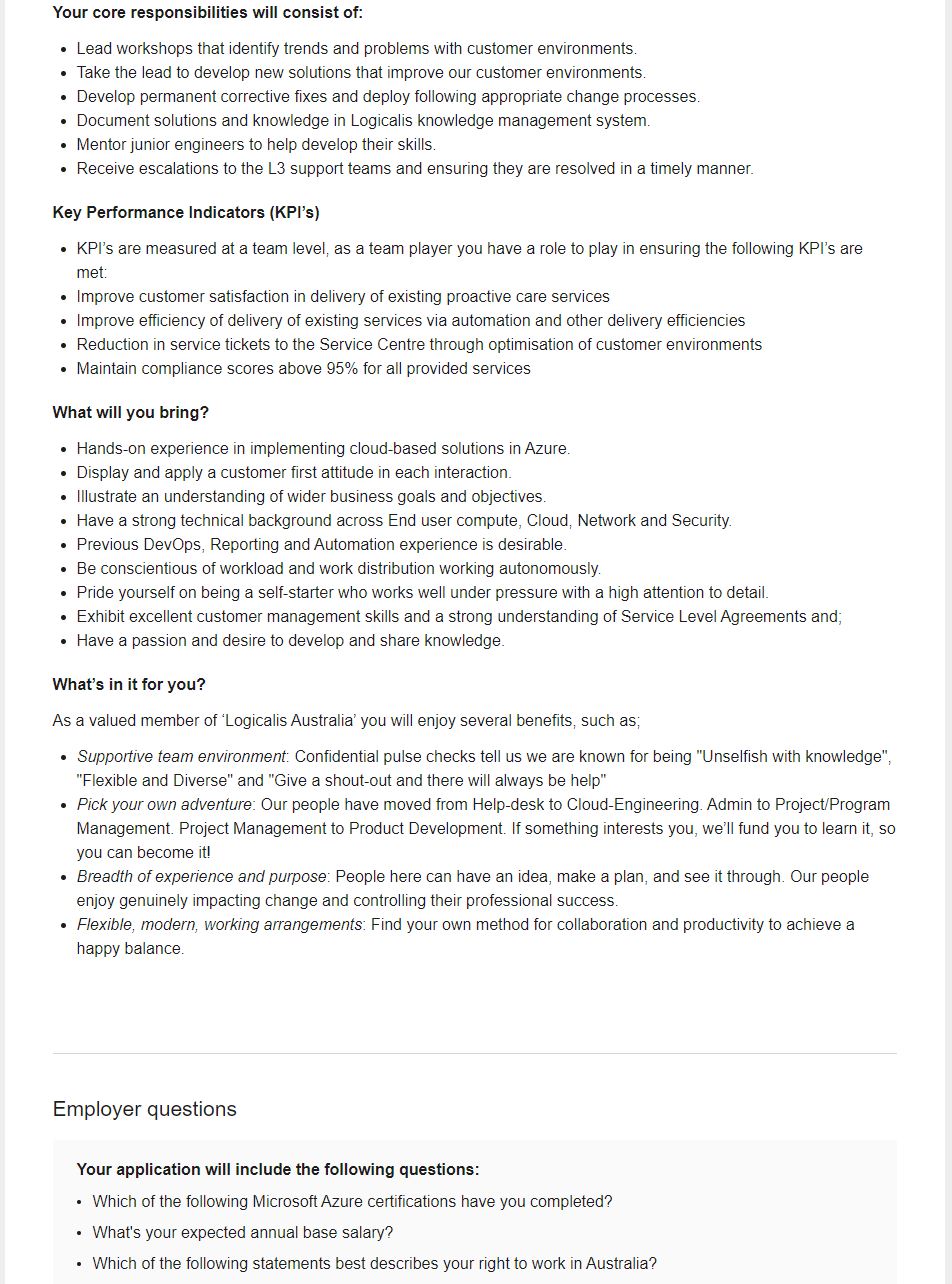
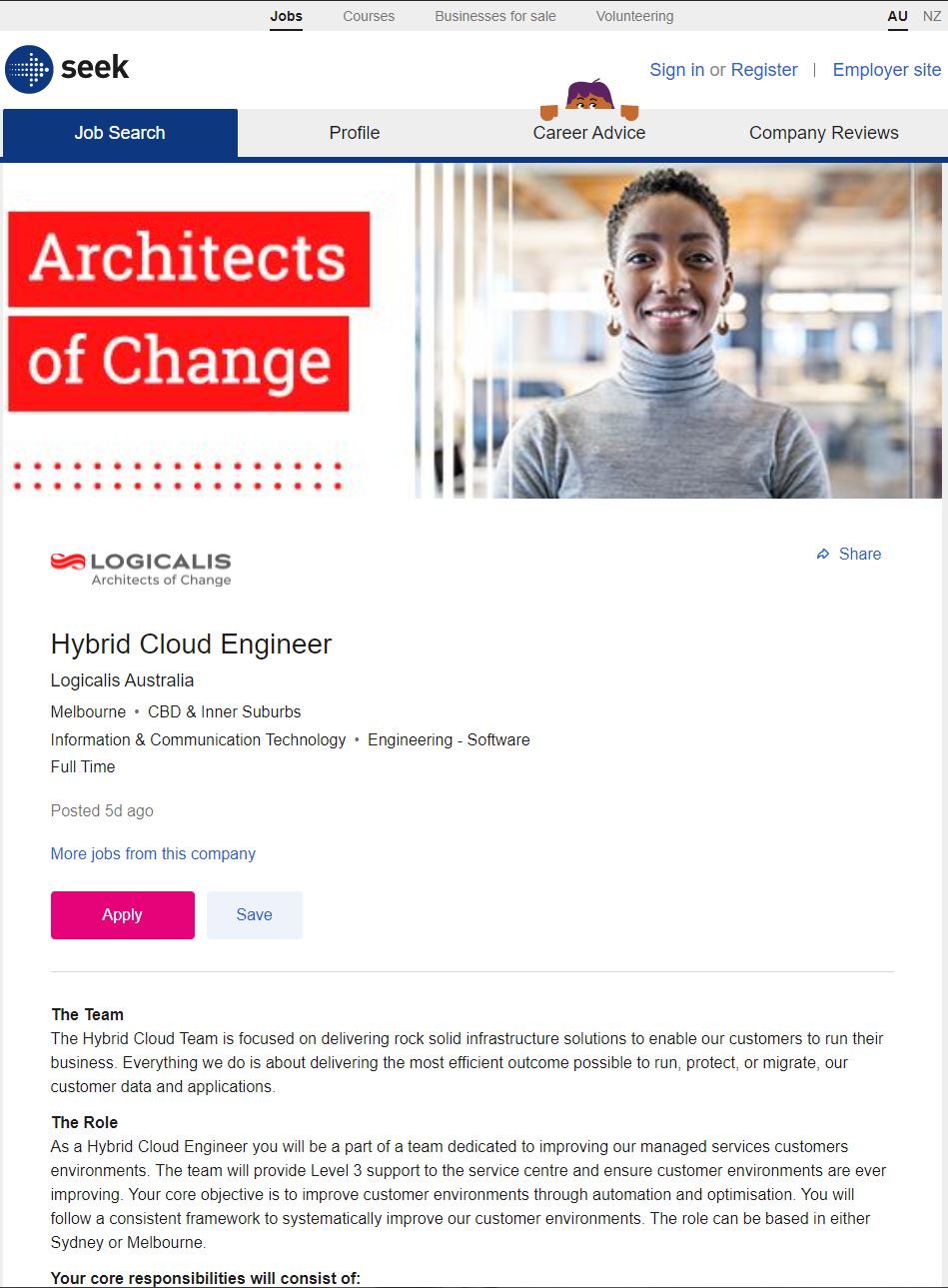
This information was only gathered after doing these tests and will be beneficial to me during my studying but also further in my career if I’m to work in group environments having this understanding may prove advantageous to both myself and the team.

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

I will strive to be in a group which is balanced, as I understand “Too many astronauts in the rocket and the rocket wont get anywhere.” Meaning a team needs to be diverse and continuing with the metaphor a rocket needs an astronaut but also people in the control center and engineers and manufacturers, ultimately saying a variety in skills, perspective and understanding will allow our group to be able to function its best. As having people who have different personalities, learning types and brain dominance, we are able to check for potential oversites which another might have missed or be able to understand concepts or ideas differently as they are explained from a different perspective. But it is also important to be in a group which does not veer too far from yourself as this may cause friction as the differences can be difficult to solve, however let this not be an excuse as it also is important to learn how to solve disagreements and how to manage situations which may not favourable as this is a great opportunity to raise intrapersonal and leadership skills.

**Ideal Job:**

**Job Advertisement:**



(Hybrid Cloud Engineer - Logicalis Australia, 2021)

<https://www.seek.com.au/job/53881609?type=promoted#searchRequestToken=41a93b4d-fc61-47eb-84f1-9c7ec24301b6>

**In your own words, what is the position, and particularly what makes this position appealing to you?**

The position which has intrigued me is ‘Hybrid Cloud Engineer’ offered by Logicalis Australia. This position interests me because I believe that this field of work and cloud technology is going to be vital if not already, as there has been an increase in the rate in which data and services are becoming more online based with cloud storage servers, cloud computing and other cloud based technologies. This increase I believe is due to the cloud becoming more feasible as internet infrastructure continues to improve allowing it to be more accessible to people, furthermore, the rate of improvement of this technology and field has enabled it to be financially viable for individuals, small businesses or larger companies. The company’s focus is on enabling business clients to use the cloud to migrate data or their applications. The position offered is a team role, the hybrid cloud engineer will be working in a team to provide improvements to managed services customer environments, with the cloud engineer tasked to improve customer environments though automation and optimisation. This role I believe would be a perfect mid-term goal as my long-term goal would be to work with larger companies such as Steam or Google in projects like ‘Steam cloud play’ or ‘Google Stadia’ these being projects which I’m interested in, as the ambition is if there is access to a stable internet connection you gain full access to cloud storage, services or even computing power all through the cloud. These projects in particular attempt to enable games to be played with less powerful,cheaper hardware as the computing and processing of the game is completed remotely through cloud computing thus enabling consumers to not have to buy expensive hardware to play the games at their recommended or intended setting. This role as a hybrid cloud engineer will be a fundamental stepping stone in understanding the role of a cloud engineer with the benefit of being able to work in a team and gain experience interfacing with clients*.*

**In your own words, what are the skills, qualifications and experience required for the position?**

In this role aside from possessing general skills such as, effective communication, time management, problem solving, conflict management, being client focused and other such traits. In this position IT specific skill are the focus, skills such as having practical experience in implementing cloud based solutions in ‘Azure’ microsoft's cloud computing service, possessing a strong background/prior experience with end user compute, cloud, network and security, in addition to DevOps reporting and automation experience being preferable as well.

This background is based on the foundations of many different IT fields interweaving, researching more on the role of cloud engineers more technical skill which one should have include expertise with the Linux operating system is a must as this is the most widely used system for cloud development, comprehensive knowledge of cloud database management, ability to programming using languages like SQL, Java, Python, Ruby, Golang, PHP and .NET to name a few. The knowledge required is plentiful however these skills are also used in other IT professions in addition to these are garnered through experience in the industry or further learning through university as this is a more advanced IT position.

**Describe the skills, qualifications and experience you currently have?**

Though possessing the General skills mentioned earlier to an adequate to strong level, I lack the technical wherewithal to be able to qualify for this job. After completing this course there is an abundance of further qualifications, knowledge of other programming languages that aren't offered in this course and comprehension of cloud softwares/frameworks in addition to the linux system and virtual machines which I’ll have to familiarise, learn and gain experience using before I'm able to fully enter this profession.

**Create a plan describing how you will obtain the skills, qualifications and experience required for the position, building on those you have now.**

Completing this Bachelor of IT course will be the foundation which my career will be built on. Aside from entering the workforce and gaining experience that way, RMIT offers a Masters in IT but there are also courses provided by the Australian Institute of ICT, in which a key focus is on cloud computing and technologies in both courses. Thus, completing this masters course and working in an entry level position in at a company such as Logicalis Australia which offer junior positions in addition to funding for you to learn and improving skills which will benefit the career journey which I will be striving for, this essentially being the best of both worlds in-terms of gaining experience in the industry but also improving and learning more skills and gaining the qualifications necessary through further university study and through the company I’ll be able to grow and be promoted into the position of hybrid cloud engineer if I stay in the company or if I wish to move elsewhere I will have both general and technical IT skills and knowledge required for the position of Cloud engineer with my goal to be involved in the frontier of innovation of this technology in art, gaming or business.

**Proposed Project:**

**Overview:**

The proposed project is going to be a smartphone budgeting app, its purpose to be the centre where small business owners or individuals are able to interact with and manage their finances. With cooperation with potential banks enabling the app to have greater integration to their finances, through the input from the user of their bank the app can give financial summaries at the users given frequency, push notifications of upcoming bills and be able to take tax info from inputted purchases and to generate tax bills, making tax time easier as its possible to keep track and manage different purchases be it business or personal.

**Motivation:**

The app seeks to enable easier budgeting, make the process more intuitive, simple yet comprehensive enough for business, an accountant before a professional accountant if you will. With the Consumer Policy Research Centre (2020), highlighting that Covid-19 has increased consumer vulnerability, this being linked to job loss and a decrease in income for people and businesses alike, with those who are financially literate able to spend from saving but those who didn't have savings being worse off. The app hopes to help people become more financially literate and understand the power of budgeting and how it's able to alleviate the stress caused by unpredictable financial events.

**Description:**

With the purpose of this app being to help increase the capabilities of small businesses and individuals in a financial capacity, thus the features which the app is able to potentially do should enable this. The primary role of this app is to be a budgeting app and so to reflect this the app will allow users to create different budgets from editable templates for individual, household or small business, with these budgets being able to potentially be linked to the users chosen bank account. This gives them a real time update on their spending through setting a set spend amount, with alerts given to highlight the users expenditures and where they are regarding breaching their given budget. Furthermore, within each budget it is possible to get a more detailed breakdown and the expenditures in addition to being able to create tax invoices for the expenditures (like those given when making an online purchase) this enabling them to better keep track and have receipts of their purchases over time for when taxes must be done. Another feature for families includes the ability to promote healthy financial practices to children via parental oversight through pocket money/allowances management, through the household budget option you would be able to link family member accounts under a main one and allowing this to be possible. It is also important to understand the link with the bank does not allow for the transfer or movement of funds through the app nor will it display the sensitive information of users as this is most likely breaching many laws alongside the app not taking the same degree of precautions such as those taken by banks regarding that subject. but the app allows for the data (that is not personal like customer registration numbers) which are presented on banking apps/ internet banking to also be displayed and be better interpreted by the user on the app compared to what may be offered by banks.

Obstacles and limitations of this project begin in the research stage as there will need to be understanding of what on the market is like this for apps which provide the same or similar services, being able to compare and contrast their implementation and try avoid making the same mistakes be it logistically or user interface and design. Another obstacle is with the feasibility of this project regarding the implementation or cooperation with banks and privacy and data security management as this is an area which will need to be carefully administered as there will be personal banking information which may be gathered and a breach of this will be detrimental with the app creators and banks being held liable and the user being left vulnerable as their information is not secured, thus making this a vital part of the project to invest time and resources into, to ensure that the app is not a risk to the banks nor users involved.

**Technologies:**

The main software to be used in the development of this app are; ‘MIT app inventor' for the back end development and ‘Proto.io’ or ‘Mockup.io’ for the front end development. MIT App inventor is an open source program usable by anyone but proto.io or mockup.io are not, though they do provide free trials as well as educational discounted pricing for the use of their full suite of their products for students. In terms of hardware, a computer, phone and stable internet connection will be the most fundamental things: computer for creation, phone for testing and internet connection to be able to move files easier from phone to computer and vice versa. Additional extra software includes being able to access cloud storage services be those provided by microsoft, amazon or google to be able to store and transfer user data.

**Skills Required:**

To be able to develop this tool it is important to have an understanding of programming languages like python or java/C++ to understand the processes which will help the app work. However, through the use of programs such as MIT App Inventor we are able to create a rudimentary version of the app as the program has the necessary tools to be the backbone and provide the structure for the app without great knowledge of programming being required. Furthermore the use of software like ‘Proto.io/Mockup.io’ will aid in the creation of the user interface and provide graphical artefacts to understand how the app will look and function with skills in art and design being beneficial for this section of the project. It is feasible to create a basic version of this app with a computer, phone and the software mentioned, implementing all the features however, will require large amounts of work and research as this is an ambitious project if implemented fully. Another skill would also include understanding the cloud and how cloud storage would be able to be implemented in storing data.

**Outcome:**  
On the success of this app the impact will be through the increased financial literacy of users and to be a robust financial management tool for both small businesses and individuals. The app will enable its users to understand where their money goes and implement better financial practices, the added benefit of being able to generate tax bills and invoices will enable tax time to be much less of a daunting task as the app can be seen as an assistant accountant of sorts empowering people to take control of their finances easier and in a much more intuitive way. Thus, helping solve financial hardship through the promotion of healthy financial practices be for individuals, households or small businesses alike.

**Reference Page**

***Source: 1***

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