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GitHub Public Repository URL: https://github.com/s3921239/intro-to-it-assessment-1
GitHub Pages URL: https://s3921239.github.io/intro-to-it-assessment-1/

1. Personal Information

I was born in Glasgow, Scotland. My father is Scottish, and my mother is English. As a child I moved between Scotland and England numerous times which resulted in an interrupted education. I completed my high school education in Cambridge, England in 1992. After completing high school, I managed to get a job as a database programmer using a technology that I don't think exists anymore named dBase. In 1994 I emigrated to Perth, Australia with my family and have lived in Perth ever since. After arriving in Perth, I studied various industry certifications, including Microsoft Certified Systems Engineer, Cisco Certified Network Associate, VMware Certified Professional, NetApp Certified Storage Administrator, EMC Storage, EMC Avamar and Hitachi Storage Systems. I live with my wife and two youngest children, the older two live on their own now. I have a passion for fast motorcycles and currently own a BMW S1000 RR which is pictured below. I will often spend full days out on country roads with my bike, pushing it and myself to the limits.

The maximum speed I have had this bike up to is 317 KM/h on a racetrack which I don't recommend to anyone that doesn't want their whole body, especially their neck to hurt for 2 weeks afterwards. It takes a lot of physical effort to hold on and your head bounces around like a punch ball.

2. Interest in IT

My interest in IT first started at the age of 10 when my father bought me a BBC Micro and a subscription to Input magazine (Wikipedia.org 2020). The magazine ran for 1 year between 1984 and 1985 and produced 52 weekly instalments. It taught readers how to program in

both basic and 8-bit assembly language. I found these both particularly easy to pick up and was soon programming my own simple games. From that point on I have had a huge interest in writing programs that make life easier for me. Since 2003, I have been employed in the infrastructure side of IT, working with everything from endpoints through to enterprise level storage, virtualisation, networking, and servers. As part of my experience in infrastructure, I have been involved in datacentre installations, monitoring, and maintaining hardware and software, project implementations and design work.

I chose to come to RMIT because I wanted to head back down the programming path and couldn't get directly into university because my last official education was in 1992. I approached OUA who advised taking the first 2 units of the Bachelor of IT, then enrol in the Bachelor of IT if I pass them. This course was chosen as it had a reasonable amount of programming in it.

During my studies I am hoping to get a grounding in programming again. I have not done much of that in the last 10 years and am very rusty. I am also interested to see how others learn and work in teams. Once I complete the Bachelor of IT I would like to continue official education in programming.

3. Ideal Job

My ideal job is a Mobile App Developer.
A link to an advertisement for the job is here: Mobile App Developer.
A screen shot of the advertisement can be seen below:

boost design.

Share

Mobile App Developer

Boost Design Pty Ltd

Sydney · CBD, Inner West & Eastern Suburbs

Information & Communication Technology · Developers/Programmers

Full Time

Posted 3h ago

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Shape the future and design products for exciting new tech start-ups and established businesses!

- Opportunity to develop new-to-world Mobile Apps from scratch
- Exciting & varied projects incorporating cloud and hardware connectivity
- Based in Sydney's Inner West in a trendy converted warehouse

Our multi award-winning product design consultancy develops electronic, mechanical and software products for a range of start-ups and established businesses. On the forefront of new innovations, we've seen tremendous growth and are now looking for an App Developer to help us keep up with an ever-expanding pipeline of exciting new projects.

Typical job responsibilities include:

- Build front and backend Android and iOS mobile applications
- Design HTML/CSS user interfaces
- Work as part of an interdisciplinary team to build bespoke and innovate products with IoT and cloud capabilities.
- Identify and plan for new features
- Develop application programming interfaces (APIs) to support mobile functionality
- Suggest and implement new mobile products, applications and protocols
- Remain up to date with the terminology, concepts and best practices for coding mobile apps
- Design and deliver high-quality user experiences
- Use and adapt existing web applications for apps
- Write unit and UI tests to identify malfunctions
- Communicate with users to understand their needs and experiences, integrate feedback into the UI experience.
- Provide frequent and accurate progress updates, and communicate any issues that may impact project timelines, budget or output quality
- Compliance with Boost Design's procedures and policies

The ideal candidate will have most of the following:

- Ability to architect, design and develop software at each stage from ideation through to product release
- 3+ years of experience specifically in App development
- Extensive knowledge of at least one relevant programming language (e.g. Swift, Java)
- Ability to develop a maintainable and reusable codebase using OOP design principles
- Experience with using third-party libraries and APIs
- Ability to develop applications that work with hardware devices (or capability to learn how to)
- Written, verbal and social communications skills to collaborate with a diverse workforce
- Ability to work both autonomously and collaborate as part of a multi-disciplinary team
- Able to product a quality code and end-product within agreed timelines and budget
- Self-motivated with a thirst for learning new skills and technologies
- Relevant Bachelor's degree, such as in computer science, mathematics or engineering

This position is seeking an iOS and Android application developer. The position involves creating front and backend applications, interfaces using HTML and CSS, API's for mobile computing, and communicating with end users to understand their requirements and to obtain feedback on the product as it develops. Participation in projects and a team environment are a must. As with any role these days, compliance with company policies and procedures is also very important. What makes this position attractive to me is the variety of skills required and the diversity of the role along with the idea of creating an application that gets used to solve real problems

The skills required to perform this role include the ability to perform all the stages of software development from design right through to release, the ability to program at an exceptional level in at least 1 relevant programming language such as java or swift and to be able to create re-usable code in the form of Object-Oriented Programming. In addition, there is a requirement to have good written, verbal, and social communication skills, to be self-motivated and produce a high-quality product to budget and time constraints. The qualification requirements are to have a Bachelor's degree in a relevant subject including computer science, mathematics, or engineering. The advertisers are looking for a candidate with at least 3 years' experience in application development and experience using and integrating with third party APIs and libraries.

The skills required that I currently have are design skills. Although I have not performed this is a software development environment, I have worked on infrastructure projects where I have designed, developed, implemented, documented, and performed a hand over of various sizes either individually or as a member of a team. I believe I have good written, verbal, and social skills. I am self-motivated and always strive to produce work of the highest quality. I have a proven history of working within time and budget constraints during my time in IT and can't recall a time I have ever gone over either of them.

To build the skills and obtain the qualifications that I need to obtain my ideal job, I will complete the Bachelor of IT, then pursue further study in the field of programming. While I am obtaining the qualifications that I require, I will start creating mobile applications to begin creating a portfolio.

4. Personal Profile

a. **Myer-Briggs Test Results Below:** They can also be viewed at https://www.16personalities.com/profiles/1819d628f6fff

Your Personality

Retake the Test | View History

Mind	Energy	Nature	Tactics	Identity
84%	52%	52%	51%	53%
INTROVERTED	INTUITIVE	THINKING	PROSPECTING	TURBULENT

Mind

This trait determines how we interact with our environment.

16% EXTRAVERTED — 84% INTROVERTED

Energy

This trait shows where we direct our mental energy.

52% INTUITIVE — 48% OBSERVANT

Nature

This trait determines how we make decisions and cope with emotions.

52% THINKING — 48% FEELING

Tactics

This trait reflects our approach to work, planning and decision-making.

49% JUDGING — 51% PROSPECTING

Identity

This trait underpins all others, showing how confident we are in our abilities and decisions.

47% ASSERTIVE — 53% TURBULENT

b. Learning Style Test:

What's Your Learning Style? The Results

Alex Hutton's scores:

- Auditory: 20%
- Visual: 35%
- Tactile: 45%

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

Tactile

If you are a tactile learner, you learn by touching and doing. You understand and remember things through physical movement. You are a "hands-on" learner who prefers to touch, move, build, or draw what you learn, and you tend to learn better when some type of physical activity is involved. You need to be active and take frequent breaks, you often speak with your hands and with gestures, and you may have difficulty sitting still.

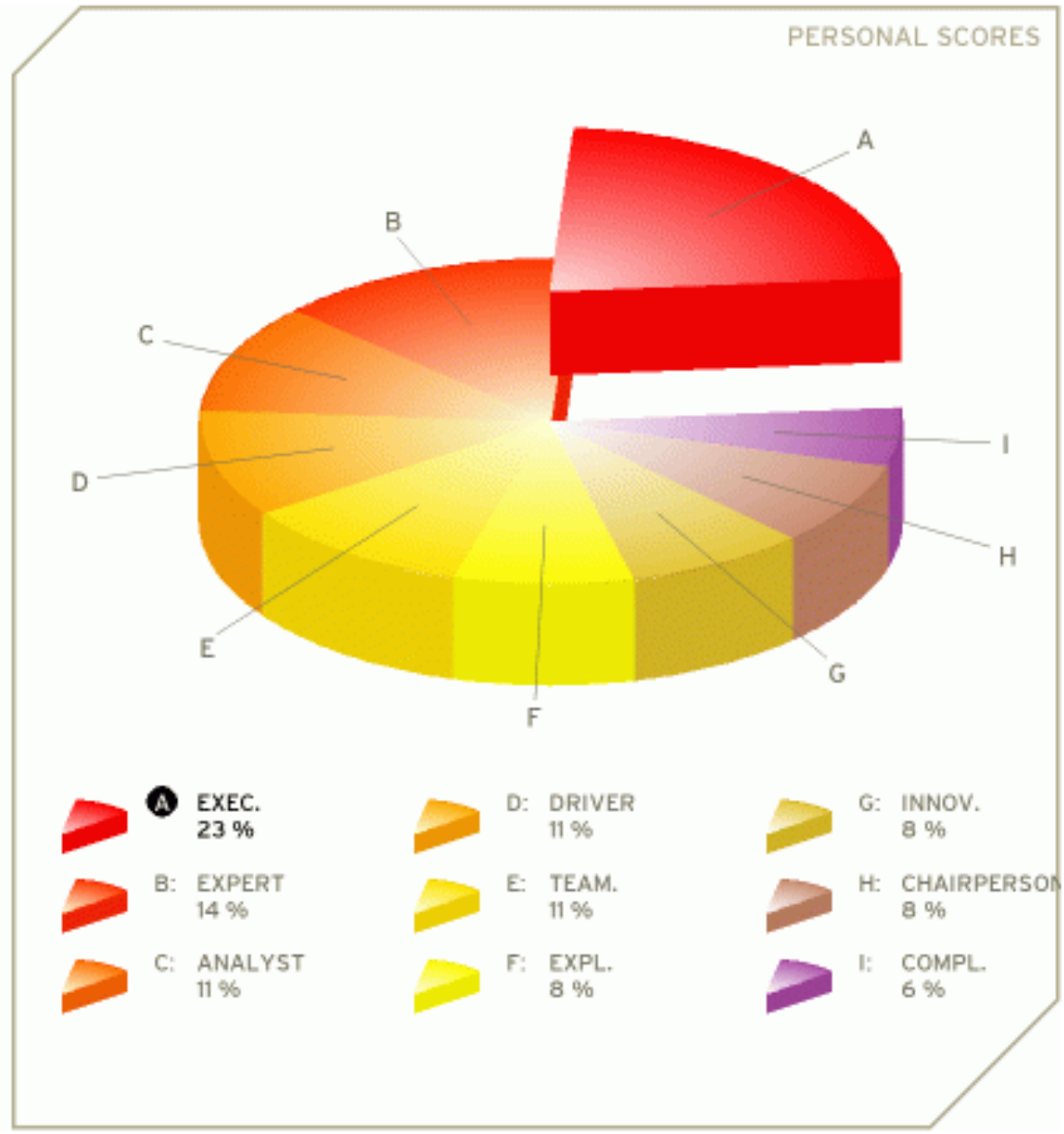
As a tactile learner, you like to take things apart and put things together, and you tend to find reasons to tinker or move around when you become bored. You may be very well coordinated and have good athletic ability. You can easily remember things that were done but may have difficulty remembering what you saw or heard in the process. You often communicate by touching, and you appreciate physically expressed forms of encouragement, such as a pat on the back.

Here are some things that tactile learners like you can do to learn better:

- Participate in activities that involve touching, building, moving, or drawing.
- Do lots of hands-on activities like completing art projects, taking walks, or acting out stories.
- It's OK to chew gum, walk around, or rock in a chair while reading or studying.
- Use flashcards and arrange them in groups to show relationships between ideas.
- Trace words with your finger to learn spelling (finger spelling).
- Take frequent breaks during reading or studying periods (frequent, but not long).
- It's OK to tap a pencil, shake your foot, or hold on to something while learning.
- Use a computer to reinforce learning through the sense of touch.

Remember that you learn best by **doing**, not just by reading, seeing, or hearing.

c. Team Role Test: (https://www.123test.com)



"Your team roles:
Your answers have been used to identify which team role(s) suits you best. This suitability is expressed as a percentage. The nine team roles are the Executive, Explorer, Innovator, Analyst, Driver, Chairperson, Completer, Team player and Expert. A total of 100 points are divided over the various roles. A group role can have up to 25 points. The graph above shows how each team role fits you. After the graph, each team role is explained in detail, in the order of its importance to you.

***Executive**:*

The executive is sometimes also referred to as the organizer. The executive is generally disciplined and eager to get the job done. He or she is efficient, practical,

and systematic. Executives are well organized and diligent, and quickly turn the ideas of a team into concrete actions and practical plans.

***Expert**:*

The expert has the skills and expertise required for the specific task at hand. He or she has a strong focus on the task and may get defensive when others interfere with his or her work. The expert prefers to work alone and team members often have a great deal of trust and confidence in him or her.

Analyst:

The analyst has a tendency to be reserved and critical. The analyst will also react to plans and ideas in a rational and sensible way. He or she will favour a prudent approach to matters and will evaluate them according to their accuracy before acting.

Driver:

The driver is generally very ambitious and energetic. He or she may appear as impatient and impulsive. The driver is a strong motivator and will challenge others at crucial times. Although the actions of the driver may sometimes seem somewhat emotional, they do play a crucial role in pushing the team forward to succeed.

Team player:

The team player is caring, avoids conflicts, and fosters harmony. Being someone who likes to help other people, the team player is generally considered agreeable and friendly. He or she is diplomatic and emphasizes solidarity and team cohesion.

Explorer:

The explorer is generally an extrovert by nature. He or she is cheerful, gregarious. The explorer is also investigative, interested and curious about things. Because explorers like to improvise and communicate with others, they will have little problem presenting ideas to the team and developing new contacts.

Innovator:

The innovator is often the creative generator of a team. He or she has a strong imagination and a desire to be original. The innovator prefers to be independent and tends to approach tasks in a scientific way. As a creative individual the innovator may play a crucial role in the way a team approaches tasks and solves problems.

Chairperson:

The chairperson has a strong coordinating role. With an emphasis on procedures, the chairperson will try to bring and keep the team together. He or she is communicative and deals with the members of the team in a respectful and openminded way.

Completer:

The completer is very conscientious and feels responsible for the team's achievements. Completers are concerned when errors are made and they tend to worry because of their controlling nature. The completer is also known as the finisher because they are most effectively used at the end of a task, to polish and scrutinize the work for errors, subjecting it to the highest standards of quality control."

d. My Analysis

After completing and reviewing the results of the tests, I can say that in relation to me, they are about 80% correct. The Myer-Briggs results show that I am introverted with intuitive, thinking, and prospecting traits. I enjoy thinking about things in depth, no matter what the subject. As stated, I do love to analyse patterns and notice discrepancies which at times makes me feel like I have obsessive compulsive disorder. I am and have always been a person that prefers to learn by doing. I am not satisfied knowing that if I tick the box, it will fix the issue, I want to know what ticking the box does "under the hood". I have been a team leader in my roles in the IT industry and have proven to be good at the role. I have always been very good at learning and understanding technology, to the point where I have also been technical leads in various different areas of IT, which is in line with what the team roles test indicates.

I think these results may influence by behaviour in a team where I will try and assume a lead role, whether that be as a team lead or a technical lead.

When forming a team, I should take this into account so that the team is not top heavy with similar team members and look for members that can fill other roles that compliment mine rather than compete against them.

5. Project Idea

Overview:

The project is to create a mobile application for some doctor's services. This will provide a convenient and more time friendly way for people without emergencies to interact with the local General Practitioner. There may also be a benefit of reducing the cost of the consultations due to efficiency. The application will provide video and audio consultations, blood pressure readings, weight, and body mass data to the doctor. This information will be obtained through the use of external devices such as a smart watch and smart scales. It will allow prescriptions and referrals to be sent electronically and provide an online booking service.

Motivation:

I have many medical conditions that require medical appointments with my GP. Around 65% of my visits are for prescriptions or blood pressure checks. When I attend the surgery, I can wait anywhere from 10 minutes to an hour just to see the doctor. Once I get called by the doctor, I am out again in 10 minutes or under. If I include the time to travel to and from the surgery, it can take up to 2 hours of my day for a simple appointment. I have a few friends who do not live in the metropolitan area who also must travel more than 20 KM to see their doctor. I believe a mobile app like this will reduce the need to visit the doctor, save time and free the doctor's surgery up for more pressing appointments.

Description

The product will be a mobile application that will run on Android or iOS. It will integrate with smart watches and smart scales. The features will include the following:

- **Online booking service** – This will allow the patient to book appointments with the doctor and select what the appointment is for at the time of booking. This is like other applications on the market.
- **Video and audio appointments** – There will be an option to book a video or audio appointment with the doctor, although this will not be a requirement if the patient is requesting services that do not require immediate contact.
- **Blood pressure** – Blood pressure will be monitored via a smart watch and relayed back to the application. At the time of booking, this will be requested and sent to the doctor.
- **Weight and body mass** – There are two methods in which this can be collected, the first is using smart scales and the second is using a smart watch that provides the feature. Both methods will relay the information to the application and send it to the doctor at the time of the booking.
- **Prescriptions** – Prescriptions can be requested via the app if the patient is currently taking the requested medication. Once prepared, the prescription can be sent directly to a pharmacy or sent electronically to the patient to print out and present at a pharmacy.
- **Referrals** – A doctor will be able to raise a referral for the patient and send it electronically to the place of referral or to the patient to print at home.
- **ECG** - The latest smart watches such as the Samsung Galaxy Watch4 is capable of ECG monitoring and is registered with the Australian Register of Therapeutic Goods. This data can also be sent to the doctor when requested.
- **Historic data and trending** – Monitoring blood pressure, weight, ECG data, and body mass electronically will allow for trending and reference points for the doctor

The doctor will be able to perform all his/her operations on the application either via the mobile application or via a secure web page.

The backend for the application would involve clustered application and database servers with an API written in PHP, fault tolerant storage and network load balancers. To ensure the privacy of the patients, only doctors will have access to patient data and that will be gained

via 2 factor authentication across encrypted tunnels between the client and the server. The infrastructure will be housed in a secure datacentre, with hourly backups be performed using a disk to disk to cloud method.

This application will be useful to individuals who must travel significant distances to go to their doctor or have mobility issues because it will reduce the time of visits and the frequency of required physical visits. In addition to these benefits, it will also benefit time poor individuals who put off visits because they are busy.

Tools and Technologies:

The hardware requirements for the project are listed below:

- Network Firewalls – At least 2 firewalls configured in a failover cluster.
- Routers – At least 2 network routers in a failover configuration
- Network Switches – A minimum of 2 switches configured in a stack
- Servers – A minimum of 5 servers running OpenStack, 2 for management and 3 for backend services.
- Storage – TrueNAS storage appliances configured in a cluster. These will run storage pools configured on top of RAID 6 disks. The file system used will be ZFS.

The software requirements for the backend are:

- OpenStack
- TrueNAS
- Linux OS
- Apache
- PHP
- Maria DB

Software for development will be MIT App Inventor or Google Flutter.
Skills Required:

Skills required for the project:

- Networking Engineer to configure the firewalls, routers and switches
- OpenStack specialist to install and configure OpenStack
- Storage Engineer to configure the storage
- Installers to install the hardware, some vendors require a certified engineer to install their products, others do not.
- A Flutter developer or a MIT App Inventor specialist
- Linux Engineer
- PHP developer
- Database administrator

The skills required are common and should not present any issues finding people with these skills. The hardware is standard across the IT industry and so is the software.

Outcome:

If the project is successful, there will be full working infrastructure to support the application, the application will be complete and thoroughly tested. There will be push to sign up doctors surgeries, specialists and pharmacies so people can start using it to their advantage. A successful project will lead to easier interaction with doctors for patients, patients will have greater access, time will be saved, doctors will be able to serve more patients than before, and the burden on GP waiting rooms will have been reduced.