Introduction to IT - Assignment 1

Nicholas Drinkwater
s3508178
s3508178@student.rmit.edu.au
drinkwatern.github.io/IIT
github.com/drinkwatern/IIT

Personal Information

Hey, I'm Nick! I was born in Sydney but grew up in Melbourne. Both of my parents were born in Australia and I've got two siblings, an older sister and a younger brother. I've actually previously started this degree, back in 2015 but after doing half a year, I stopped to go travel and live overseas for 2 years in Edinburgh, Scotland! Now that we can't travel overseas due to Coronavirus, I thought what better time to come back and finish my degree!

I love travelling and have been all around the UK and Europe, Singapore, to the US four times and to New Zealand! I love films and my favourite sport is baseball (Go Cubs!).

Interest in IT

What is your interest in IT? When did your interest in IT start?

My interest in IT started from playing video games and being the overall go to person for any tech issues that my family had! With video games being my hobby, I transitioned into building my own computers as a teenager which really stoked my interest in IT, by being able to see how a computer works and make one from scratch myself! My interests in IT now include programming, building IT systems and hardware!

Was there a particular event or person that sparked your interest? Outline your IT experience (if any).

Building my first computer is definitely the event that sparked my interest in IT! Before I attempted it, building a computer from scratch seemed like an impossible task but by breaking down the components and finding out what each part did, it made me appreciate the beauty and simplicity of IT and what it can achieve! Whilst I don't have any formal IT experience, as I mentioned previously, I have always been the go to for any IT related issues for my family or partner and have found that I have quite the knack for fixing IT related issues in many situations, including also for my colleagues at work!

Why did you choose to come to RMIT?

I choose RMIT due to the option of being able to study full time online instead of having to attend in person. As my about me mentioned, I have also previously done in person learning at RMIT and found that it wasn't the most efficient way of learning. As I now have a full time job and am looking to continue to save up money for my next overseas adventure, coming back to RMIT to study full time online was the logical choice!

What do you expect to learn during your studies?

I foremost expect to learn the necessary skills and knowledge to help me enter the IT field as a career. More than that though, I hope that my studies will inspire and engage me in topics and fields of IT that I haven't seen or encountered before. I also hope to continue to develop my passion and interest in IT and be amazed at what it can do, just like I was amazed when my first PC I built actually turned on!

Ideal Job

Job Description

Whilst this fits a bit more into the dream job category, rather than ideal job, I have chosen this job as this is what excites me so much about IT: being able to use it to achieve things that were previously unachievable, such as travelling to Mars. The description of this job includes developing and deploying software using Python and a program called LabVIEW to support and enable mission software used to control and monitor rockets on the launchpad. The job requires hand on integration of software, as well as testing and analysis of those testings to continue to ensure there are no bugs for such an important task.

Job Skills Required

Whilst the jobs does ask for a degree in computer science, engineering, math or science, it also allows you to apply with at least 2+ years of experience in software development. Therefore the skills required would include first graduating and then receiving those 2+ years of experience. It's also a requirement to be proficient in the use of Python and a program called LabVIEW which is a a graphical programming language that SpaceX employs.

Job Skills Possessed

As I'm still quite new to the field of IT, there aren't too many skills I possess yet that this job requires such as a proficient knowledge in Java or LabVIEW. However I believe that I definitely fulfil the ask that I "enjoy end-user facing roles for support and interfacing with cross-functional teams" as well as having "experience with other software or scripting languages" as I have experience with Java and Python.

Plan

My plan for a job like this would be to first graduate university and then obtain the necessary experience in software development that primarily uses Python and other programming languages, such as Java. This would involve me finding a job where I am able to obtain this 2+ years of software development experience required. For this job in particular, it is required that you are a US citizen, which whilst I would love to live in the US, citizenship can be a pretty tough to obtain. Therefore I would need to explore the options available to me to make me eligible to obtain the required visa.

SPACEX

APPLY NOW

SOFTWARE ENGINEER (GROUND OPERATIONS)

Hawthorne, CA, United States

SpaceX was founded under the belief that a future where humanity is out exploring the stars is fundamentally more exciting than one where we are not. Today SpaceX is actively developing the technologies to make this possible, with the ultimate goal of enabling human life on Mars.

SOFTWARE ENGINEER (GROUND OPERATIONS)

As a Software Engineer on the Ground Software Operations team, you will develop, analyze and verify the mission critical software used to control and monitor our rockets on the launchpad. You will be responsible for ensuring the software behaves as expected, and troubleshoot when necessary. You will have a direct impact on our ability to launch rockets frequently, safely, and reliably.

RESPONSIBILITIES:

- Develop, execute, and analyze the software configuration of ground software systems
- Invent new tools that enable more frequent and reliable software deployment, automated data review, and automated configuration verification
- Support existing ground software deployments to launch, production, and test sites
- Analyze test results and bugs that require in-depth investigations
- Hands-on integration and troubleshooting of ground hardware/software systems
- Manage support queues and ticketing system triage
- Work closely with the ground software development team to roll out new software changes
- Occasional travel to launch sites and customer sites for testing and/or operations

BASIC QUALIFICATIONS:

- Bachelor's degree in computer science, engineering, math, or science discipline OR 2+ years of experience in software development without a degree
- Development experience with LabVIEW or Python

PREFERRED SKILLS AND EXPERIENCE:

- 3+ years of experience in software development, operations, and/or support
- Enjoys end-user facing roles for support and interfacing with cross-functional teams
- Certified LabVIEW Associate Developer (CLAD)
- Experience with other software or scripting languages

Personal Profile

<u>Myers-Briggs Type Indicator</u>

Introverted - 64% | Intuitive - 58% | Feeling - 78% | Prospecting - 71% | Turbulent - 68%

Strengths

Thoughtful – Mediators care about other people's feelings.
Generous – Mediators rarely enjoy succeeding at others' expense.
Open-Minded – Mediators tend to give other people the benefit of the doubt.
Passionate – When an idea or movement captures Mediators' imagination and speaks to their beliefs, they can give their whole heart to it.
Loyal to Their Values – Doing the right thing isn't always easy, but Mediators' far-reaching vision can help them stay the course.
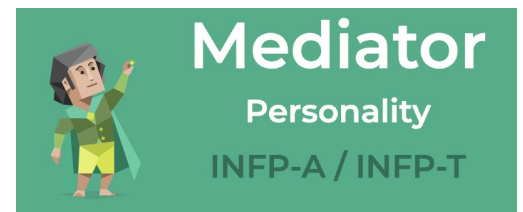
Weaknesses

Overly Idealistic – Mediators can take their idealism too far.
Self-Critical – Mediators can expect so much from themselves that they inevitably fall short.
Impractical – When something captures Mediators' imagination, they can become so consumed by it that they neglect practical matters.
Emotionally Driven – Mediators can become so focused on their emotions that they lose track of what's really going on.
Conflict-Averse – Mediators generally prefer to avoid conflict. They can put a great deal of time and energy into trying to please everyone.

Workplace Habits

Mediators want to feel a sense of purpose in their work. Wherever they find themselves on the job ladder, people with this personality type value harmony, and they try to find an emotional and moral connection to their work. Mediators can be extremely dedicated and considerate employees and due to Mediator personalities generally not enjoying hierarchies, as managers, Mediators are among the personality types least likely to act as if they're in charge.

<u>Honey Mumford Result</u>

Reflector Style - 38.3% | Theorist Style - 20.2% | Activist Style - 28.7% | Pragmatist Style - 12.8%

Reflector Style: Someone who learns by observing and considering what happened, someone who likes to consider all the possibilities and implications.
Theorist Style: Someone who likes to analyse and understand the theory behind things.
Activist Style: Someone who learns by trying. They will do anything once and tend to act first and then consider the consequences.
Pragmatist Style: Similar to the Activist, someone who is keen on trying things out and getting on with things.
Big 5 Personality Test
Open-Mindedness - 48% | Conscientiousness - 17% | Extraversion - 34% | Agreeableness - 98%| Negative Emotionality - 89%
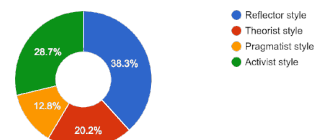
<u>Big 5 Result</u>

Open-Mindedness: I typically doesn't seek out new experiences.
Conscientiousness: I probably have a messy desk.
Extraversion: I tend too shy away from social situations.
Agreeableness: I am good natured, courteous and supportive
Negative Emotionality: I am generally anxious and tend to worry

about things.

<u>Results Discussion</u>

What do the results of these tests mean for you?

These test results confirm what I've discovered about myself in the last couple of years and what I want to continue to work on, as I believe being good natured, supportive and respectful of people is one of the best things that people can be to each other and some of the best traits to have in a workplace! With these results, it also shows that I tend to shy away from social situations and am introverted, which I am hoping that uni will be able to help with!

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

I believe that these test results put me in a really good position for working within a team! My strengths of being thoughtful, generous and being open minded will mesh really well within a team as I'm always respectful and open to any ideas that my group mates may have! As I do tend to shy away from social situations and am more introverted, these could negatively affect working in a group, therefore I know that I will need to work on and overcome these to ensure that I am involved and active within a team.

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

I would really like to strive towards having similarly respectful and thoughtful people in my team as my results show that I tend to avoid conflict and drama and I hope that as I can tend to be self critical and impractical at times, I have determined and encouraging team members who can nudge me back onto the path if these negative traits start to overtake and influence my strengths.

Project Idea

Overview

I plan to create an app that you can use to help keep track of workouts in the gym. This app will be designed to nail the basics, featuring the ability to track all of the workouts/exercises that you want to do in the gym and then track your sets, reps and weight used for each exercise. The aim for this app is too quickly be able to refer to it in the middle of a gym session and easily be able to identify what exercise is next, or how many sets/reps you need to do. Therefore I aim to ensure that this app is responsive and that you will not need to pass too many screens or other features to actually get to where you want on the app.

Motivation

I have just started going to the gym myself and I have found that there are hundreds of apps related to going to the gym that claim to be the only app you ever need. All of these apps though suffer from being overly bloated and confusing, stuffed full of so many features that aren't necessary, that the core purpose of the app can no longer be defined. I have therefore resorted to using a simple spreadsheet to track my workouts, but I believe that an app can be created to replace using a spreadsheet that keeps it simple, having minimal essential features detailed below to avoid being overly bloated like many of the most popular workout apps.

Description

In my app, the main feature that I plan to have is for users to input and then display the workouts that they want to complete and a method to track how many sets, reps and what weight the user is wanting to complete. To achieve this, I will be taking inspiration from the simple spreadsheet that I use but implement it in such a way that the information, such as the particular exercise that you are on and how many sets and reps you need to complete and the weight is easily readable and accessible as a GUI interface.

To initially setup the app and the exercises, the app will take user input for the exercises that they would like to complete on a certain day of the week. It will then take user input for the amount of sets for that exercises and how many reps are in each set. Finally, the app will receive user input for the weight of that exercise. I plan to enable users to type in these values but also plan to implement a up and down button system to register the amount of sets/reps or weight.

Once this information has been received for all of the exercises planned for that day, the user will need to hit the workout button and then will be shown a full screen display of each exercise in order, which will display the reps/sets and weight. The users will be able to set exercises for dates in the future if they wish or just the exercises they plan to do that day. On this screen, I will also take user input button to track how many sets/reps they completed. All of this information will then be saved locally to the users device. The reason for this is to make the app easier and faster to use , without having to register and login in each time it will help to create a better user experience!

With data being stored locally on their device, this avoids any security issues with having a username and password for their information and by storing this data, it will allow users to historically track their past exercises that they've done as well as the sets/reps and weight they have previously done. This will also enable users to be able to import a previous exercises or whole workout that they've done before, removing the need to add in the exercise they want to do each time.

I also plan to have a feature to take notes for each exercise completed, which will require further user input that will be accessible on the full screen page when on that exercise. This notes section is intended for the user to input key considerations for how to complete each exercise properly for easy access and reminders on each exercise.

Lastly, I would also like to add a feature that when the app sees that a user has completed an exercise more than twice that has hit the maximum amount of reps the user set, the app suggests that more weight is added.

Tools and Technologies

For the first version of this app, I have decided to just focus on releasing this on Android devices. I've made this decision as I have an Android device which makes it easier to test, but I also believe that the barrier to entry is lower for Android and easier for small app developers to create and publish an app.Therefore to build the app, I will be using Android Studio which is an integrated development environment allowing the creation of Android apps using the Android SDK. I will also be implementing a system to remember workouts that users have set and historically track this data so that users can refer back to previous workouts. This data will be saved locally to the users device to avoid needing to implement a server language such as PHP. Therefore to achieve this, I will need to implement MySQL into my app for this purpose of tracking, storing and modifying the data.

Skills Required

As I am prioritising Android support for this app, I will be coding the app in Java and will require the skills and knowledge required for this. To assist, I will be using what I learn from Introduction to Programming, as well as the official Android Developer documentation which includes tutorials for first time app builders such as myself. I will also need to learn MySQL which whilst I do have a little bit of experience with, I am basically starting out new with. As there is a lot of programming that will need to be completed, I will be relying on YouTube and free online tutorials to provide the necessary knowledge and instruction on how to implement these. I will also need to ensure that I am disciplined to stick to my plan as to avoid feature creep that so many of these apps suffer from.

Outcome

For this project to be successful, the outcome will be a working app that takes user input for the workouts, the sets and the reps that the user want to do and have this information easily editable and accessible. The main aim for this app is to not be overly bloated and crammed full of features and I will track this by having the information that the user wants about their exercises on the screen within 5 seconds of the app, with these exercises being the main screen of the app. This app has the potential to really hit a niche in the market and solve the problem of overly bloated and feature stuffed apps and I believe this ease of use and low barrier for entry will entice and draw in users looking for a simple way to track their workouts.

References

Ideal Job
SpaceX 2021, SOFTWARE ENGINEER (GROUND OPERATIONS), viewed 13 March 2021, https://boards.greenhouse.io/spacex/jobs/5127262002?gh_jid=5127262002

Personal Profile
16personalities 2021, infp-personality, viewed 10 March 2021, https://www.16personalities.com/infp-personality

LifeTrain 2021, Learning Styles Quiz, viewed 11 March 2021, http://www.emtrain.eu/learning-styles/

Rosewell, J n.d., Learning styles, open.edu, viewed 20 March 2021, https://www.open.edu/openlearn/ocw/pluginfile.php/629607/mod_resource/content/1/t175_4_3.pdf

outofservice 2017, The Big Five Project Personality Test, viewed 10 March 2021, https://www.outofservice.com/bigfive/