



ASSESSMENT 3

COSC2196/CPT110

Abstract

URL Repo: <https://github.com/Team-TBD-RMIT/Assessment-3.git>
Website: <https://team-tbd-rmit.github.io/Assessment-3/index.html>

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Contents

Artefacts Contents	4
Prototype Website:.....	4
Website Development & Design Components:	4
Website Sitemap:.....	4
Product roadmap Illustration:.....	4
Web scrapper code:.....	4
Prototype Database:	4
Mobile App Wireframe:	4
Misc. Artefacts:	4
Team Profile:	5
Team Name:.....	5
Who are, Team TBD?	5
What does TBD stand for?	5
Why To be determined?	5
Personal Information:	5
Bronagh Falloon - s3965252:	5
Malachi Cleland s3965226:	6
Meg Maroni s3967486:.....	7
Scott Percival s3966885:	8
Team profile:.....	8
Individual Websites:.....	8
Group processes:	8
How well did your group work together in Assignment 2?	8
Will you be introducing any changes in process for Assignment 3?.....	9
Career plans:	9
Overview:	9
Burning Glass Data:	10
Labour Market Insights Data:	11
Seek Data	12
National Skills Commission Skills Priority List (SPL) 2021 Data:	12
What common elements are there, if any?	13
What differentiates each position from the others?	13
How similar or different are the career plans across the group?	13
Career plan Table:	14
Conclusion:.....	14

Tools:	15
Overview:	15
Website:	15
Database:	15
Application:	15
Other:	15
Microsoft Teams:	15
Meetings:	15
Teams Tasks and Planner:	16
Wiki:	16
Document Library:	16
GitHub:	16
Group Website:	16
Group Git Repository:	16
Audit Trail Success:	16
Project Description	17
Overview	17
Topic	17
Motivation:	17
Landscape	18
Detailed Description	20
Aims	20
Plans & Progress	21
Roles	25
Scope and limits	25
Tools and technologies	27
Testing	30
Timeframe	30
Risks	36
Group Processes and Communications	36
Skills and jobs	37
Full Stack Developer	37
Systems engineer	38
Project Manager	39
Community manager	40
Group Reflection:	42

Bronagh Falloon:	42
What went well	42
What could be improved	42
At least one thing that was surprising	42
At least one thing that you have learned about groups	42
Malachi Cleland:	42
What went well	42
What could be improved	42
At least one thing that was surprising	42
At least one thing that you have learned about groups	42
Meg Maroni:	43
What went well	43
What could be improved	43
What was surprising	43
What I have learned about groups	43
Scott Percival:	43
What went well:	43
What could be improved:	43
At least one thing that was surprising	43
At least one thing that you have learned about groups	43
Group:	44
What went Well	44
What could be improved	44
References	45

Artefacts Contents

Prototype Website:

GitHub Bang 4 Buck website link: bang4buck.tech ([team-tbd-rmit.github.io](https://github.com/team-tbd-rmit))

GitHub Bang 4 Buck repository: <https://github.com/Team-TBD-RMIT/Bang4Buck.git>

Website Development & Design Components:

Company Logo [SharePoint Logo Image Folder](#)

Logo Styling Ideas: [Logo Design Ideas PowerPoint](#)

Wireframe: [Figma - B4B Wireframe](#)

Colour scheme & styling: [Figma - B4B Colour Scheme](#)

Font: [Adobe Fonts - Brevia Font Family](#)

Website Sitemap:

PDF: [SiteMap.drawio.pdf](#)

Product roadmap Illustration:

PDF: [B4B Product Roadmap 2022-08-05.pdf](#)

Web scrapper code:

PowerPoint: [Webscrapper code presentation.pptx](#)

Prototype Database:

Entity Relationship Diagram: [EntityRelationshipDiagram.drawio.pdf](#)

Data Dictionary: [DataDictionary.xlsx](#)

SQL Files: [Schema](#), [Pre-Population](#), [Queries](#)

Mobile App Wireframe:

Link <https://app.uizard.io/p/90af32d8>

Misc. Artefacts:

These include more minor artefacts from our deliverables that are ultimately included in larger artefacts like logo designs seen throughout wireframe and prototype website, terms and conditions, privacy policy seen on the prototype website all of which can be found in our deliverables folder on MS teams

Link: [Deliverables](#)

Team Profile:

Team Name:

Team TBD

Who are, Team TBD?

Team TBD are a group of 5 Passionate RMIT University Students who have banded together to deliver an outstanding assessment 2 and 3 for Introduction to IT, working together on a project that if it was to go live, we believe would have a positive impact on Australian Consumers.

What does TBD stand for?

It stands for to be determined.

Why To be determined?

Because like the future our potential is boundless, the possibilities endless and we do not want to be limited to a singular idea. TBD stand for much than just to be decided, it stands for:

- Tenacity – We are a determined team who strive to be at the forefront of technology and how it can benefit humanity
- Belief – We are believers of a better world; a better society and we believe that is possible through the innovation of technology
- Discovery – We're discoverers of tomorrow's innovations today, through the exploration of technologies and the furthering of our studies

Tomorrow's discoveries are yet to happen. The future is TBD.

Personal Information:

Bronagh Falloon - s3965252:



Name: Bronagh Falloon

Student ID: S3965252

Student Email: S3965252@student.rmit.edu.au

Nationality: Australian

Languages Spoken: English

Highest Education: Certificate IV in Healthcare

My name is Bronagh Falloon, I am of British descent, and my family came over to Australia when I was just 1 year old from New Zealand, being granted Australian citizenship in 2014. I got a Certificate IV in health care, studied nursing for 2 years and I now work at Factory Blinds making hollands. One odd hobby I have is learning about personality systems and the categorization of

these traits. I have spent many hours learning the MBTI (Myers Briggs Type Indicator) personality inventory and then I learned about Jungian cognitive functions which in the context of MBTI are the

extroverted or introverted versions of Feeling, Thinking, Sensing, and Intuitive. A few years ago, a YouTuber came out with an expanded system that came from the MBTI inventory called objective personality types, which contains 512 types that I have spent over a hundred hours learning.

Malachi Cleland s3965226:



Name: Malachi Cleland

Student ID: S3965226

Student Email: S395226@student.rmit.edu.au

Nationality: Australian

Languages Spoken: English

Highest Education: Year 12 VCE (Victorian Certificate of Education)

My name is Malachi Cleland, and I was born and raised in rural Australia where I still live today. I am looking toward moving to Melbourne soon, having lived there for almost two years in the past in which I almost completed an advanced diploma degree.

Hobbies I love include writing and drawing. I haven't drawn in a while, but pencil is my medium of choice as I am a bit of an art snob/purist with an opinion using a tablet and stylus is a bit of an easy route to art. It's something about seeing my imagination forged into reality that really excites me. Most of the time I'm not interested in technologies or gaming consoles, I will be reading my heart out.

I learned Indonesian in my high school years, many moons ago. Though it's instilled a desire to learn plenty of languages since (German at the top of the list). On the list of jobs, I would love to be is a translator, because bridging down language barriers to bringing people together is a beautiful thing, in my opinion. Plus, if you do what you love you never call it work, right?

Meg Maroni s3967486:



Name: Meg Maroni

Student ID: S3967486

Student Email: S3967486@student.rmit.edu.au

Nationality: Australian

Languages Spoken: English

Highest Education: Cert IV in Information Technology

My name is Meg Maroni, and I am apart of Team TBD. I was born and have lived majority of my life in Albany, a stunning coastal city in Western Australia, which boast a wealth of hiking trails, wildlife, and bush tracks that I enjoy taking advantage of in my leisure time. Here, I also finished my K-12 education and received my TAFE (technical and further education) credentials, earning my highest certificate – a Cert IV in Information and Technology – in 2020.

I am honoured to have been named the 2020 Vocational Student of the Year by the Apex Club of Albany, and one of the 2020 Southern Regional TAFE Students of the year throughout the 12 campuses in the Great Southern Region in appreciation of my academic achievements. My current position as a Technical Support Officer for two primary schools and one secondary school in my area has given me extensive experience in managing, maintaining, and fixing the physical technological infrastructure and networking of medium-sized organisations.

Scott Percival s3966885:



Name: Scott Percival

Student ID: S3966885

Student Email:
s396685@student.rmit.edu.au

Nationality: Australian

Languages Spoken: English

Highest Education: Cert IV in IT
networking (2006)

Born 1989 in Sydney, Australia. I was released onto this world alongside The Simpsons and the release of Gameboy in Japan and North America. I have lived predominately in the outer Western Suburbs of Sydney in a region called the Hawkesbury. I currently both work and study IT.

Outside of work and study, I live a rather simple and peaceful life. My most notable interest, to me at least would be Sci-fi. I love all things Sci-Fi including games, movies, shows, etc. I think it may be fairer to say I love all things space-related in general. On clear nights I love looking up at the night sky and gazing across the stars imagining the possibilities, similarly to IT. What draws me to it is the vastness of space, the unknown, and the possibilities. I believe in a brighter future for humanity, and I believe to get to that brighter future, we need to look to technology, and we need to look to space.

Team profile:

Individual Websites:

Bronagh Falloon

<https://bronagh-falloon.github.io/Intro-to-IT-AT1/>

Malachi Cleland

<https://gitterdammerung.github.io/HTML-and-CSS-test/>

Meg Maroni

<https://meglm.github.io/IIT-A1/>

Scott Percival

<https://scottyp1989.github.io/>

Group processes:

How well did your group work together in Assignment 2?

Team TBD worked reasonably well in Assessment 2. We had satisfactory communication throughout with 2 weekly formal meetings held on Mondays and Thursdays to review progress and discuss any blockers. We had somewhat utilized Microsoft Planner within teams to track tasks. There was also light communication via Microsoft Team chat for A2 related topics as-well as other topics.

While this was satisfactory throughout the most part we found towards the end that this level of communication failed to withstand the pressures of “crunch time”. In the final weeks when it came time to put all the pieces together the team initially struggled and suffered from a breakdown in communication. Some driving factors of that is we had not continued to utilize the tools we had

implemented to track the assessments progress and individually assigned tasks. Another factor was lack of team mentality due level of communication we had initially utilized resulting in members feeling more like strangers than a team. However, we combated this adversity with diplomacy and communication as-well as agreeing on several methods to help address the issues team members felt they faced, allowed us to finally achieve that unity as a team, including overcoming the breakdown in communication, leading to a strong finish as a team in completing the A2 Assessment.

Will you be introducing any changes in process for Assignment 3?

We will be introducing several additions to our processes for A3 and A5 having learned from troubles in assignment 2. There include the following

- Continuation of hosting 2 formal team meetings on Mondays and Thursdays at 7pm, scheduled ahead so all formal meetings for Team TBD are mapped out in Calendar available to all members.
- Introduction of a weekly impromptu meeting via MS teams for general team catch up and informal discussion about project, including meeting's involving individuals tasked with the same assessment components
- Introduction of milestones and deadline meetings where milestone have been completed or deadlines have been approached that do not fall within the normal official meeting schedule. The team will conduct special meeting to review and discuss the milestone or deadline outcome. This will be short informal meeting mainly to mark the occasion of having reached a certain stage of the project
- We have discussed and agreed that all work in progress/draft content for all members to be accessible to the rest of the team either via team GitHub repository or the teams document library
- Introducing a requirement which was agreed by all members to utilize the Team A3 Microsoft Planner Kanban Style board for all tasks related to A3 and A5. Including a review and training session. The board will be reviewed weekly and discussed by all members.
- We will be using checklists. Either using Microsoft Excel or 365 list in conjunction with our planner app to ensure completion of the required tasks for our milestones.

Career plans:

Overview:

In this section We will be reviewing our teams career plans and desired job goals using a combination of industry data and group perspectives.

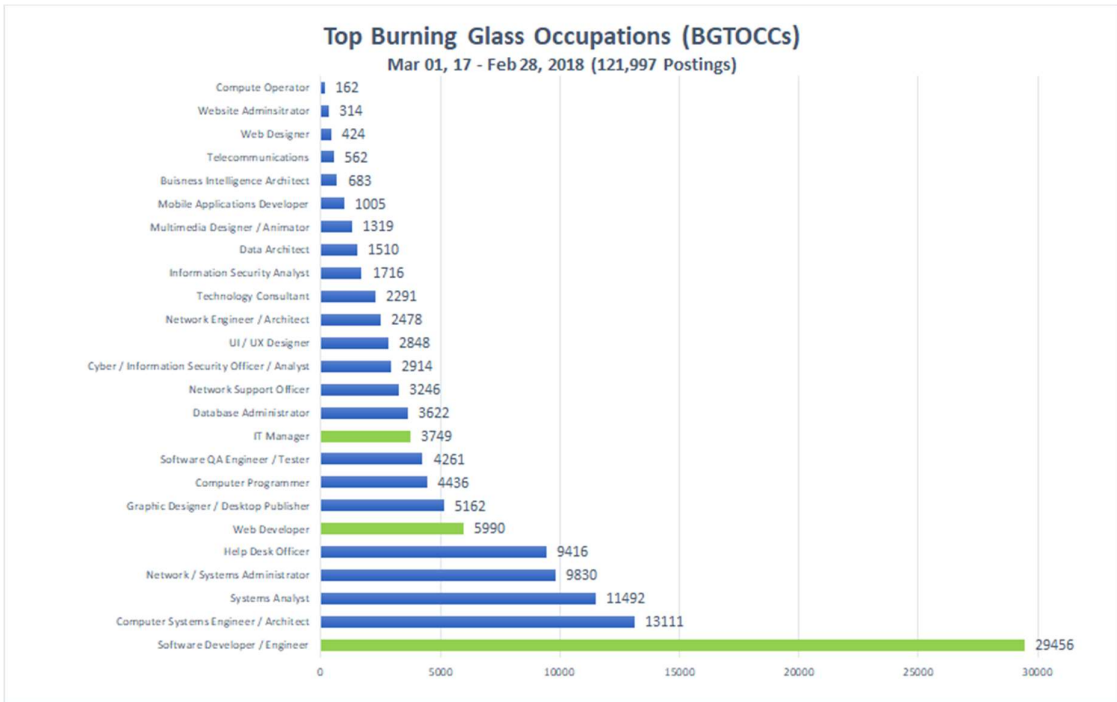
Our teams' careers offered quite the variation as each team member has a unique career with components that different to the others. However, in terms of core skills and the starting points of a career plan to achieve them, the careers also had a lot of similarities. We believe these differences and similarities complimented both our current and previous assignment well. Allowing the individual to apply the skills of their futures careers in individual areas these assignments to beneficial results while working well as team. The teams' careers are as follows:

- Scott Percival – Senior Project Manager
- Bronagh Falloon – Front End Developer
- Meg Maroni – Machine Learning Researcher
- Malachi Cleland – Software Engineer

As some of these roles are more specialized positions that didn't offer much useful data that could accurately be portrayed in the Burning Glass Data (Labour Insight Jobs (Burning Glass Technologies),

2018) and other data resources, they were categorized into 3 umbrella Job Titles: Software Engineer, Web Developer, and IT Project Manager. These may vary slightly in name specification over the data sets, but each role accurately represents the main aspects of what the groups careers are.

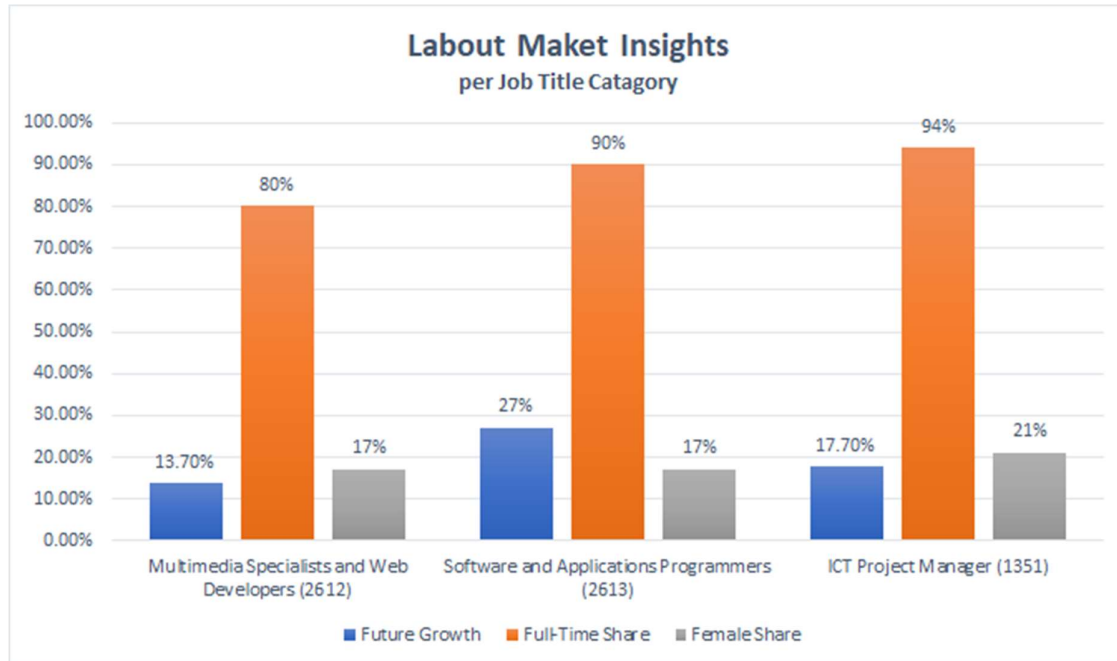
Burning Glass Data:



Job Title/Occupation Ranking (Labour Insight Jobs (Burning Glass Technologies), 2018) :

- 1st. Software Engineer (29,456)
- 2nd. Web Developer (5,990)
- 3rd. IT Manager (3,749)

Labour Market Insights Data:



Future Growth Prospects

- 1st. Software & Application Programmers (27%)
- 2nd. ICT Project Manager (17.70%)
- 3rd. Multimedia Specialists and Web Developers (13.70%)

Full Time Share (Current workforce working Full-Time)

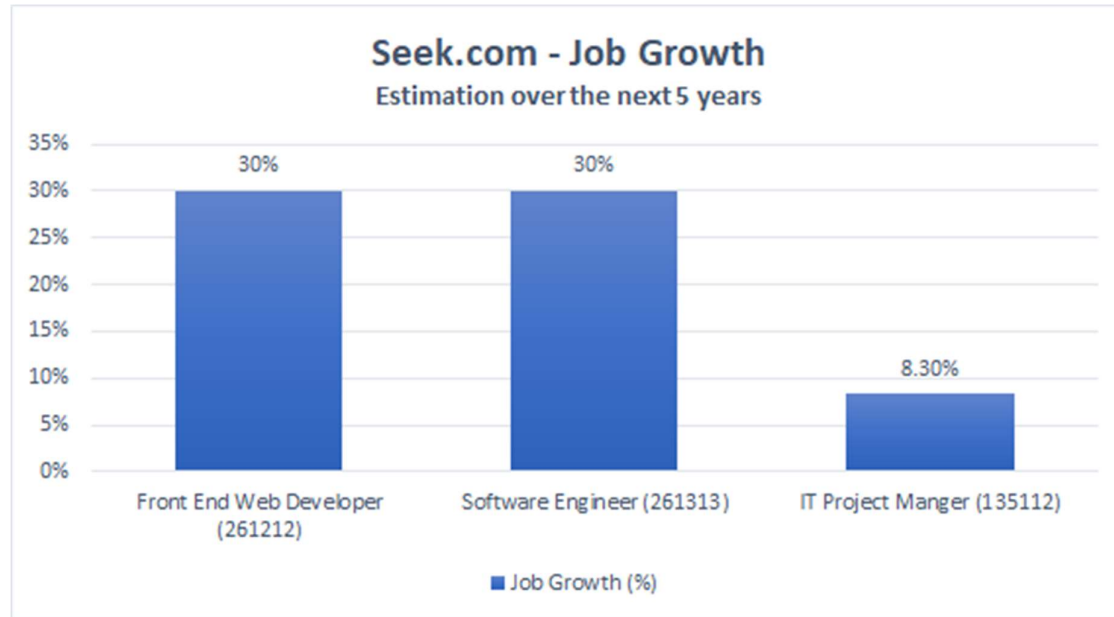
- 1st. ICT project Manager (97%)
- 2nd. Software & Application Programmers (90%)
- 3rd. Multimedia Specialists and Web Developers (80%)

Female Share (Current female workforce)

- 1st. ICT Project Manager (21%)
- 2nd. Software & Application Programmers (17%)
- 2nd. Multimedia Specialists and Web Developers (17%)

(Labour Market Insights, n.d.)

Seek Data



Job Growth Climate (5 years)

- 1st. Software Engineer (30%)
- 1st. Front End Web Developer (30%)
- 2nd. IT Project Manager (8.30%)

(Seek, n.d.)

National Skills Commission Skills Priority List (SPL) 2021 Data:

SPL categories			Count of occupations	
	Current Labour Market Assessment	Future Demand Indicator		
1	Shortage	Strong future demand	57	153
2	Shortage	Moderate future demand	87	
3	Shortage	Soft future demand	9	
4	No Shortage	Strong future demand	208	646
5	No Shortage	Moderate future demand	394	
6	No Shortage	Soft future demand	44	

Position Title	AUS	NS W	VIC	QLD	SA	WA	TAS	NT	ACT	Future Demand
135112 ICT Project Manager	S	S	S	S	S	S	S	S	S	Strong
261313 Software Engineer	S	S	S	S	S	S	S	S	S	Strong
261212 Web Developer	NS	S	NS	NS	NS	NS	NS	NS	NS	Strong

SPL Future Demand Ranking

- 1st. ICT Project Manager
- 1st. Software Engineer
- 2nd. Web Developer

What common elements are there, if any?

As you can see from the data sets, the careers have some common ground. Such as:

- All have strong number of jobs listing available
- All have a strong future demand
- There are shortages for IT managers and software engineers across Australia
- All 3 have a low Female workforce demographic that will hopefully change over time

On top of the data set, the team review and believe our career also share the following similar elements.

- All roles require strong analytical and/or problem-solving skill.
- All roles require the person to have strong teamwork and collaboration skills.
- Several of the roles require various leadership skills.
- Several of the roles require familiarities and skills associated with project management, either as part of the project or leading it.

What differentiates each position from the others?

As you can see, the data sets the careers also have some differences.

- Machine learning researcher failed to feature in the data sets on their own due their highly specialised nature and assumptions are made based on grouping it with ICT project management
- Software engineering is by far the most popular job according to the data in the IT industry both currently and in the future
- There are currently no shortages for Front end web developers based on the data

On top of the data set, the team reviewed and believe our career also have the following differences from each other.

- One role requires a Ph.D. before being eligible.
- Two of the roles could be considered quite late-stage and advanced positions in one career path, requiring 10+ years of education or work experience while the others are reasonably more on the side of intermediary roles to be considered.
- Only one role requires skill or experience with graphic application such as Illustrator.
- Only one role requires skills or knowledge specific to project methodologies PRINCE2, PMBOK, SCRUM, etc.
- Only one role requires experience in sensor fusion or expertise in usage of signal and imaging processing practices and techniques

How similar or different are the career plans across the group?

As you can see from the career plan table below. Our teams' career plans at the most basic level are somewhat similar. All involved completing a relevant bachelor's degree in information technology, computer science, information systems, software engineering, or similar certification. Most involve pursuing further expertise and skills by completing MOOC courses or similar such as Scriba or industrial-specific courses such as PRINCE2/PMBOK methodologies. Several involve working in similar roles to that of the group to build further work experience for eligibility for their desired roles.

Where they differ, at least in two of the cases, is the timeline to reach a stage where the person would be considered skilled and experienced enough to fill such a position. Both Senior Project

management and Machine Learning Researcher positions will require 10+ years of additional education and/or relevant work experience. Machine learning Researcher by far has the greatest academic requirements requiring a Ph.D. on top of establishing a career in similar roles prior to being eligible.

Career plan Table:

Name	Description	Minimum Qualifications	Required Experience	Skills	Career Paths
Scott Percival	A senior project manager overseeing a large-scale project for an NSW government body specifically in the education industry.	A bachelor's degree in relevant field such information technology or business	10 or more years' experience as a Project Manager; Experience in Project methodologies; asExperience in in using ICT/Technology to deliver projects	Excellent stakeholder management skills; Advanced presentation skills; Strong Leadership Skills; Strong Risk management skills; Excellent communication skills; Strong Documentation processes; Strong Analytical skills; Team oriented with Strong team and	Obtain a bachelor's degree in information technology or Information systems; Further studies in relevant subjects such as project methodologies like Prince2/PMBok ; Continue in current career trajectory gaining experience in Projects ; Transition into a business/system analyst role; Improve on existing soft skills relevant to the role
Patrick Reyes	A software engineer in a technology consulting company that focus on data & analytics, digital, cloud & technology, customer engagement, artificial intelligence and cyber security	A bachelor's degree in relevant field such as computer science or cloud technologies	Extensive experience in working in cloud environments; Experience in CI/CD, TDD and secure coding practices; Experience in integrating web-based applications and backend API services; Experience with	Consultative Mind set; Strong Stakeholder management skills; Strong Communication Skills; Passion for teaching, coaching or mentoring teams members; Skills working in an Agile Environment;Team player	Obtain a bachelor's in information technologies or computer science; Complete additional certifications in frameworks, methodologies etc; Obtain work experience with a business that utilizes relevant desired technologies and methodologies
Meg Maroni	Machine Learning Researcher with Lockheed Martin Australia. With a focus on the research and development of Machine Learning technologies to advance Australia's understanding and proficiency in computer science, image processing, analytics, and	A PHD in a relevant discipline from a recognized institute which would also likely require a relevant undergraduate, postgraduate and masters.	Project experience in research and development; Experience in a research team that combined multiple professional specialisation; Experience with reporting present research	Excellent communication skills; Excellent Reporting Skills; Experience in sensor fusion, plus manage the errors that can be present in collected data; Expertise with usage of signal and	Obtain Bachelor of Information technology; Obtain an honour or master's degree in a specialization of IT; Work experience as a graduate software engineer or similar; Complete a PHD
Bronagh Falloon	Front-End Designer for a large global business working on high profile government projects.	n/a	Experience with HTML, Javascript, CSS and Markdown; Experience with front-end technologies such as vueJS as well as preprocessing platforms such as SCSS; Experience with	Team player; Innovative and out of the box thinking; Designing user experience information flow, interaction models and users interfaces; Creation of Deliverables such a wireframes,	Obtain a bachelor of information technology; Learn HTML and CSS Via Scrimba; Do course on graphic applications
Malachi Cleland	Software Engineer for Australian Target Systems who has experience in researching, building, and delivering high end software solutions.	Relevant bachelor's degree	Experience with Web frameworks- Aurelia, React, View, AngularExperience with Languages - C++, JavaScript, TypeScript, Node.JS, Python, C#, GOExperience with Data Management - MongoDB, SQL, InfluxDB, Redis, ElasticsearchExperience User Interfaces - HTML, CSS, SVG,	Software design, development, testing, documentation, and delivery; Source code management; Excellent Communication and collaboration skills; Root cause analysis and problem-solving skills; work with the full development life cycle, delivering complex iterative solutions	Complete Bachelor of Information Technology

Conclusion:

Team TBD's Careers and career plans are ultimately both similar and different. As is the nature of the IT industry. Looking at the data all our career has strong future demand and growth, they all share similar skills, and we all are pursuing a similar path to obtain our goals. Completing both the previous and current assignment however these different and similarities have been invaluable to this performance, allowing us to work well as a team and to utilize our unique skills to meet the assignments requirements One of the big contrasts however, we believe discussing amongst ourselves as-well as reviewing our own data is the timeline to obtain some of these careers. Two are obtainable relatively soon whereas the other are quite senior roles and will require many years of further education and experience before the team members would be realistically eligible to work in their planned careers.

Tools:

Overview:

Team TBD utilizes a combination of tools for collaborating and completing work including GitHub and Microsoft Teams. Our A3 progression and collaboration has been predominately done and tracked in Microsoft teams, utilizing a range of its inbuilt features and additional app integrations such as Tasks and Planner to track actions and overall project completion. Wiki for useful information like team info, Microsoft Forms for voting, One Note for meetings and other notes, etc. Below you'll find links to both our GitHub repository, website, and Microsoft Team resources that demonstrate our progress. This includes our meeting recordings, Agenda and actions from our formal meetings as well as other information on other areas such as, our planner link wiki link & Document Library link.

Website:

Figma (Figma, 2022) – Wireframe and colour scheme design

Diagrams.net (Diagrams.net, 2022) – Site Map

WebStorm by JetBrains (JetBrains, 2022)– Integrated development environment

Adobe Stock (Adobe, 2022)– Website wallpaper

Adobe Fonts (Adobe, 2022)– Website font

Database:

Diagrams.net (Diagrams.net, 2022) – ER diagram

Microsoft Excel – Data dictionary

Visual Studio Pro (Microsoft, 2022) – SQL scripting and testing

Application:

Uizard (Uizard, 2022)– Wireframe design

Other:

Wave.Video (Wave.Video, 2022) – Advertisement video maker

Microsoft Teams:

Microsoft Teams Project Invite: [Team TBD](#)

Meetings:

21/07/2022 [Agenda Recording Actions](#)

25/07/2022 [Agenda Recording Actions](#)

28/07/2022 [Agenda Recording Actions](#)

01/08/2022 [Agenda Recording Actions](#)

04/08/2022 [Agenda Recording Actions](#)

08/08/2022 [Agenda Recording Actions](#)

11/08/2022 [Agenda Recording Actions](#)

15/08/2022 [Agenda Recording Actions](#)

18/08/2022 [Agenda Recording Actions](#)

Teams Tasks and Planner:

[link](#)

Wiki:

[link](#)

Document Library:

[link](#)

GitHub:

Group Website:

<https://team-tbd-rmit.github.io/Assessment-3/>

Group Git Repository:

<https://github.com/Team-TBD-RMIT/Assessment-3>

Audit Tail Success:

As a central location for our team's assignment work or the assignment's versioning history and audit trail, GitHub was not very helpful for this team's processes on the assignment. Although tracking the website uploads and contributions history on GitHub is useful, it is only a small part of the overall assignment criterion and thus was left under the sole authority of one person who felt the most confidence with that component. It was however helpful as a backup tool with the versioning history, as there was an error made and the websites became all merged into one. The data was successfully restored before the merges took place and thankfully there was no data loss.

Our main effort to manage versioning and contributions has been a manual process of keeping track of each person's completed tasks, through the planner, checklists and meeting which are then entered into a spreadsheet to calculate a reasonable contribution percentage based on their contribution efforts, and the versioning history has been managed in Microsoft Teams with one main document being contributed to for the content and versions being implemented at different stages of progress, for example, V1 being an initial draft of documentation week before the due date, V2 being final draft contributions closer to the due date, V3 will be the final draft for submission.

Project Description

Overview

Topic

Name of idea:

Bang 4 buck

Website:

<https://team-tbd-rmit.github.io/bang4buck.tech/>

What is it?

Bang 4 buck is a price comparison community & site currently in its planning, and prototype phase being developed by Team TBD. During its initial features Bang 4 buck function and scope will be rather limit as we endeavour to develop a strong relationship with our userbase and create robust, functional, and beneficial pricing and product features for our community.

How will Bang 4 buck come to be?

There are a lot of planned features and functionality for Bang for buck, we're also resource light in terms of budget and team resources. As a result, we're loosely using a lean methodology and have split the product development into 5 phases. (Meshchankina, 2022) With the aim to initially provide an MVP targeted at university student and Budget conscious techy savvy individual with the current cheapest price on an electronic product that also shows the price history of the product and the convenience of being able to send stock availability even online or close by. Before eventually expanding outside of the electronic market across all Australian Retailer markets trying to encourage all Australian consumer to utilize our platform.

Motivation:

With inflation rising. (Hutchens, 2022) Now more than ever Australian consumers need a convenient way to make better purchasing decisions to ultimately save money. At Bang for buck we believe There is a demand in the Australian market for consumers to be able to reliably secure good quality products at bang for buck prices, and we believe we can help that. Take a site called Oz bargain for example. An Australian forum/community dedicated to finding and sharing bargains/coupons/sales on all kind of products and services. It gets over a million Visitors A month (Ozbargain, 2022). It goes beyond just Australian consumer too; in the US it is believed that Price comparison websites take more than \$800 million in commission each year. (Israr, 2021).

The initial inspiration for Bang for buck is because these days we at team TBD, do what we can to try and save money while also ensuring what we purchase is at-least half decent quality. As a result, we as consumers have spent hours researching a product before purchasing or hours finding the best price for it. Only to leave us asking ourselves was the time spent worth the money saved? Or worth the product I got over the product I would have just picked if we didn't? As consumer we in the past have tried the other comparison sites and found them wanting, lacking in either reliability, functionality, or both, some were clearly just marketing channel designed for retailers and not the Australian consumer. It is a controversial market filled with misleading, fake, or straight up fraudulent sites designed to take advantage of Australian consumers and not help them. (Australian Competition & Consumer Commission, 2014). Due to that, we at Team TBD were inspired to try and create Bang 4 buck. Our goals are as follows:

- A reputable and transparent platform that Australian consumers can trust

- A platform that only lists products from reputable retailers that constantly reviews the products within database to avoid fake or poor-quality products.
- A price comparison site that had user-centric features that help the consumer not just the retailer market their product.
- An App that allows consumers to find good deals even when on the move and in store.
- To give back to the budget-conscious consumer community and all Australia consumers and help drive change to the Australia retail market

Landscape

Summary:

There are already plenty of price comparison sites and tools already available some even for the Australian market. (Ozbargain, 2022). (Hayes, 2022) A couple of which are either operated or backed by huge corporation with plenty of money such as Google shopping owned by google and little bird who is backed by the CBA (Statista, 2022) (Weber, 2021). Why would team TBD endeavour to build a price comparison site? How does Bang for buck planned to be innovative? Different? Dare we say better?

We're doing this because we truly believe none of them do it well. Many sites lack what we would consider valuable functionality, like price history, list of actual price comparisons (many just list a singular price and expect the user to trust it's the lowest). There are plenty out there that are not reputable or reliable, or even, misleading or straight up fake & fraudulent existing to deliver no real value to the consumer and even taking advantage of them (Wikipedia, n.d.) (Australian Competition & Consumer Commission, 2014). Many seem to be entirely focused on their retail partners. where we will be focused on creating value for our community.

We believe we have identified 4 similar sites that would be potential competitors to Bang for buck offering if/when we are to go to market. These are:

1. Google Shopping (<https://shopping.google.com.au>)
2. Get price Australian (<https://www.getprice.com.au>)
3. Little Birdie (<https://littlebirdie.com.au>)
4. Price Me (<https://priceme.com.au>)

The criteria for which we chose the 4-above site as our similar sites/competitors is as follows

- Must have X amount of similar features/functionality to Bang for buck
- Must offer pricing and product data on electronics
- Must get over 5000 visitors a month
- Primary features and functions must be available as website
- Must offer a variety pricing/product data from various retailers, not just 1 or 2.

Planned Features/Comparison Table:

This table not only lists the planned features and functions of Bang for buck but compares to those similar sites/competitors mentioned. We believe this effectively highlights as-well how we plan to be different.

Legend

Key	Description
Y	Has feature/functions
P	Partial. Has similar but not the same
N	Does not have feature
#	Feature not available in Australia

Planned Features and Comparison Table						
Feature	Description	Bang for buck	Google Shopping	Little Birdie	Get Price	Price Me
User Portal	A portal for users to participate in forums, rate & review products, keep track of price alerts etc.	Y	N	Y	N	Y
Price Comparison list	Allow users to see list of prices from different vendors with Sort function that defaults to cheapest first	Y	Y	Y	Y	Y
Price history	Show the price history of the product	Y	N#	Y	N	Y
Product Availability	Allow users to see online or local stock using device location	Y	P	Y	N	P
Price Alert	Set Price alerts on products so that it notifies users when price changes	Y	N#	Y	N	Y
Product Categorisation	Sort product in categorifies and subcategories allowing users not to just find specific product but search for range of product tied in with similar products & search function)	Y	P	Y	Y	Y
Product search function	Enable users to not just search for specific products but product types and categorises, as-well for some product range utilizing a range of criteria or even being able to search by brand or store. Available on both the website and app	Y	Y	Y	Y	Y
Ratings and Review	A robust rating and review system that will allow for users to review and rate products, it will feature reviews from the Bang for buck team for certain products, as-well as offer reviews source from reputable third-party rating and review site and give an over-all rating analysing the 3 as-well	Y	P	P	P	P
Store Directory	List all stores that either partner with or scrap data in an easy to view page for users to know. This page would also be interactive allowing the users to search for produced based on the store selected	Y	N	N	N	N

Forum (Website only)	A forum to allow the community to engage with one and other and with the site	Y	N	P	N	N
Shopping list	Ability for users to select multiple products from multiple categories and it populate the list with product from the category based on defined (cheapest available stock, closest, best rated etc)	Y	N	N	N	N
Application	Provides an application version available on IOS and android	Y	N	N	N	N#
Barcode/QR search function (App only)	Allow users to scan a product QR/Barcode and match it against the sites Database)	Y	N	N	N	N
OCR Search Function (App only)	Using an OCR live translation via device camera to identify a product name and match it against the site product Database)	Y	N	N	N	N
Customize User/Home Feed and Similar product	Allow users to customise their home feed to identify product or product categories of interest to them allowing the site to than highlight and suggest similar products they may be interested in	Y	N	Y	N	N

Detailed Description

Aims

Team TBD aim for B4B (Bang for buck) is simple. To create a reliable and trustworthy price comparison platform for Australian consumers. With a vested interest ourselves as Budget conscious consumers, we aim to create an innovative user centric price comparison experience driven by the community, for the community by focusing on delivering features, functions, and value to the consumer rather than the retailer. B4B is not alone in this space, there are other Price comparison platforms out there that offer their services to Australian consumer. What Sets apart B4B from its competition however is two main components. Firstly, our purpose. Team TBD is not building B4B purely for profit hoping to get rich from the service we offer. Instead, we're doing this to give something back to the very community we're a part of while hopefully driving wider changes that will benefit all Australian consumers as mentioned before for the community by the community, whereas our competitors focus on profit for themselves and their retailer partners. Secondly while in the latter stages of the project roll out B4B has several innovative features not yet implemented by our competitors that we believe make us truly unique. These are:

1. Mobile App: None of our main 4 competitors currently have a mobile application within the Australian market. Not only will B4B have a free Mobile App on Android and IOS but these app will bring it with several other innovative features as seen below.
2. Barcode/QR search function: With the B4B mobile apps our users will be able to scan the QR/Barcode of products instore which will match it against the site product database and show them prices (where applicable) of products in other stores, as-well as eventually suggesting similar products)

3. OCR search function: Like the Barcode/QR search function users will be able to use OCR technology to scan the label of the desired product instore and match it against a product in our database to show them prices of products in other stores as-well as eventually suggesting similar products.
4. Shopping list: Users will eventually be able to build their own shopping lists on both our application and website. This shopping list will allow user to create a list using the site product subcategories/types (I.E Butter, bread, eggs) available from the database and the B4B platform will then populate that shopping list with products from within our database based on a specific criterion (I.E cheapest, closest to the user etc.) so they're able to get the most bang 4 buck from their shopping experience.

It will be a long road to develop B4B. To meet all our goals and to have all the planned functions and features we planned to offer consumers. However, to begin with we have 3 main initial goals that we believe will help us one day get there.

- Create a prototype data scrapper: A data scrapper will be an integral tool to enable success of B4B. As mentioned, B4B plans to use several methods to collect it product and pricing data one of them being scrapping data from internet. This method will be especially utilized in the early days of B4B while we have little to no retailer partners providing us with access to their product lists through other methods. We need to be sure we can utilize a data scrapper otherwise B4B may never get off the ground
- Create a prototype database: One day there will be 1000's if not 1000's of thousands of products available on B4B Platform and likely 10's of 1000's pricing records that we will need to store and analyse to be able to deliver the functions and features we intend to deliver to our consumers, to make this possible we will need to create a robust database to store this data that the data scrapper and our retail partner data will be able to easily and reliably inputted into and then outputted out onto the side for our users to easily review relevant data such are product and pricing information.
- Create a prototype website with limited functionality and range: As with any new product or service we need to produce a functioning prototype as a proof of concept to ensure the idea works. We intend to create a basic website with our limited range and functionality to do so. You can view the scope and limits of the prototype website in our scope and limits section

Plans & Progress

How will Bang 4 buck come to be?

There are a lot of planned features and functionality for Bang 4 buck, we're also resource light in terms of financials and team resources. As a result, we're loosely using a lean methodology and have split the product development into 5 phases. (Meshchankina, 2022) With the aim to initially provide an MVP targeted at university student and Budget conscious techy savvy individual with the current cheapest price on an electronic product that also shows the price history of the product and the convenience of being able to send stock availability even online or close by. Before eventually expanding outside-of the electronic market across all Australian Retailer markets trying to encourage all Australian consumer to utilize our platform. Those 5 phases are:

Phase 1: Planning & Testing & Prototype

Overview

Arguably the most important phase. We are currently planning, building our prototype and will be testing our project idea, B4B (Bang 4 buck). Before moving onto the MVP to see if there is a desire for Bang 4 buck and its features, we will need to ensure we can build this. At a high level in this phase, we're developing a project plan, creating a functional prototype database, web scraper and website. We are also testing our ability to scrap web data so we can provide data to our user base. We have also begun implementing the infrastructure and services we'll need to develop and deploy this bang 4 buck such as utilizing AWS so we can deploy the prototypes for further usage and feedback testing by users.

Objectives:

- A Project Plan
- Testing proof of concept functionalities
- A functioning prototype web application of B4B
- A presentation on Team TBD and B4B

Implemented Features & Functionality:

- Price Comparison list
- Product Pages
- Product Categorization
- Product search function

Known Deliverables:

- Wireframe of website
- Colour scheme, font and design of home page
- Website site map
- Product roadmap Illustration
- Privacy Policy for website (Business Victoria, 2022)
- Terms and conditions for website
- Infrastructure diagram
- GitHub Repository for web application
- Web scraper code
- Prototype database
- Testing and feedback results

Budgets:

This phase has no known costs besides potential cost for the domain name which is about \$20

Phase 2: MVP (Minimum viable product)

Overview:

Initially we are limiting ourselves to a subset of the Australian Retailer market and targeting a small subset of consumers. We believe this will be important to our product development as we think it the best way to achieve a robust and reliable price comparison tool by testing our extensive features and functions with a user base who can provide invaluable insight to what works, and what won't work. We believe we can achieve this by targeting a niche market such as University student and budget conscious tech savvy individuals. Allowing us to get all our functions and features right before opening to the average consumer. During this phase we will be heavily liaising and interacting with all of our user base to get feedback on both our existing features we developed in our prototyping while

implementing and receiving feedback on our next set of features, implementing our forum will be invaluable in helping us facilitate this. (Meshchankina, 2022)

Objectives:

- An MVP website with additional functional and features to the prototype
- Establishing a B4B Community for users to provide feedback and testing of our MVP

Implemented Features & Functionality:

- Price history
- Price Alert
- Forums (Website only)
- Store Directory
- Login Portal
- Home Page for users

Known Deliverables:

- Implementation of above features
- Web Application and go live of front end for customers to sign up and begin using and testing

Budget:

This phase may have costs in association with AWS service such as cloud front

Phase 3: MMP (Minimum Marketable Product)

Overview:

Based on the results and feedback of the MVP, we will do a full product release that delivers the minimum amount of functionality we believe needed to deliver value back to our users and business. This will be first stage of bang 4 buck being a “real product” while we’re already have done market research, cost analysis and speculate on our business model. This is where we will begin focusing on working on partnership with retailers. (Meshchankina, 2022)

Objectives:

- Open to general-public, functioning website available to Australian consumer.

Features & Functionality:

- Product Availability
- Ratings & Review
- Customize User/Home Feed and Similar product

Known Deliverables:

- Implementation of above feature

Budget:

N/A

Phase 4: MMF (Minimum marketable feature)

Overview:

At this point hopefully bang for buck will have been positively received and our user base expanding with at-least a couple of partners. This is where we will start implementing features that will really set us apart from our competition such as the shopping list and release of our application to their

respective App stores. The goal is to release feature that enhance user loyalty and encourage our users to use the platform, as-well as help us begin generating some revenue. (Meshchankina, 2022)

Objectives:

- A mobile Application available on IOS and Android
- Users being able to scan products in store
- A live website with it first features that truly make it innovative from the competition

Features & Functionality:

- App Release
- Shopping list
- Barcode/QR search function (App only)

Known Deliverables:

- Implementation of above features

Budget:

N/A

Phase 5: MLP (Minimum Lovable Product)

Overview:

If you're still reading this, congratulations. At this stage We're just going to be honest with you this phase isn't going to get much attention. This project at-least for the purpose of this course (members of the team may work on out outside of university purposes) ended at the MVP except for MMF phase where we may pull components of that into the MVP (Mobile apps release). This section merely exists as a framework to the A3. This would be the stage where we really started to enter the market where we'd expand our retailers to across all Australian Retail market and implement feature that would truly make Bang for Buck innovative compared to their competitors. Probably also the hardest stage for us as university student so likely won't be done. (Meshchankina, 2022)

Objectives:

- A "Completed" Bang 4 buck platform. Featuring all the first versions of the functions that will separate it from its competition.

Features & Functionality:

- OCR Search Function (App only)

Known Deliverables:

- Expansion of product and pricing into all retail markets
- Expansion of store/retailers available on website in store directory
- Implementation of above feature

Budget:

N/A

Roles

Overview:

With such a small team, the team ultimately wore many hats throughout the A3 project, including graphic design to design branding, login, look and feel of our idea, cloud engineering to setup the infrastructure possible to host our prototype website and database, making many of the artefacts accessible to the public. As-well as being a Creative director and marketing manager setting up our presentation and other promotional artefacts to promote our project. The team also worked closely as a result often roles would overlap each off us helping the other achieve their tasks. In saying all this the team had 4 primary roles each member identified as and were mostly responsible for and they were split up as seen below.

Scott Percival: Project Manager

Scott throughout this project has worked primarily as a project manager both leading and supporting the team. Responsible for planning out and managing this project. This was an instrumental role keeping the projects on tasks and working with the team to help complete their goals. In this role Scott was crucial to developing the over-all A3 report, managing the planner, tasks list, developing a product roadmap and various checklists and other written/admin to free up time for the rest of the team to focus on deliverables and tasks enabling them to do their best work.

Meg Maroni: Lead Developer

Meg throughout this project has primarily led all aspect of the development process, working closely with the rest of the development team. Responsible for leading the development team and basically turning Scott's plans into realities. Meg Led the development on the majority of functioning artefacts, including the team website, the prototype website and creating the database that it runs off as well as been integral to the testing of the prototypes.

Bronagh Falloon: Front-End Developer

Bronagh throughout this project has work primarily as a Front-End Developer and has been crucial to over-all look, feel and design throughout these projects. Responsible for ensuring not only our deliverables functional but look good and are easy to navigate. Bronagh developed the wireframes/Mock-ups of the website and app, assisted with the Front-End development of the Team and Prototype site.

Malachi Cleland: Back-End Developer

Malachi through this project has worked primarily as the back-end developer. Responsible for ensuring the core functionality of the prototype was achievable. Malachi developed the prototype data scrapping, allowing our prototype to collect product data and display it on our website. Malachi was also responsible for helping develop the Database and the back end of the prototype website.

Scope and limits

Overview:

Bang 4 buck has been divided into 5 phases. Team TBD will not be able to complete all phases within time available for this project. However, you can expect the scope of this project to include all components outlined in Phase 1 contained within the project and progress section of this report. If possible, we will also within the time allotted to us begin making inroads into the other phases other projects. It is important within any project to clarify what is and isn't the scope of a project.

Below is what you can expect to see at the end of this project. Including the over-all objective, the functions and features and all deliverables associated with those objectives.

Objectives:

- A Project Plan: This will be the A3 Report and Team site
- Testing: Testing proof of concept functionalities such as the data scraper and product database
- A Prototype: A functioning Prototype web application of B4B (Bang 4 buck)
- A presentation: This will be a presentation by Team TBD on Team TBD and the B4B (Bang 4 buck project)

Prototype Function and features:

- Price Comparison list: The prototype will allow a visitor to view a price comparison list on the associated product page from various retailers.
- Product Pages: The prototype will allow a visitor to view and navigate through products on the website, including details about the product such as a description and product specifications
- Product Categorization: The prototype will allow a visitor to navigate through both categories and subcategories
- Product search: The prototype will allow to a visitor to quickly search for any products or categories for a search query box available on all pages.

Deliverables:

- Wireframes: Wireframes of the Prototype
- Colour scheme, font and design of home page: Mock-up of the prototype
- Sitemap: A sitemap of the prototype
- Privacy Policy: Given the website will collect personal information it is important to have a privacy policing outlining how we will deal with it.
- Terms and conditions: Given the nature of the type of website it is important to outline the terms and condition of using the prototype.
- Domain names: A Public identify for the website to be accessed over the internet.
- Product Roadmap Illustration: An Illustration of the Product Roadmap for B4B (Bang 4 Buck)
- GitHub Repository: The repository of the Prototype
- Web Scraper Code: We will produce several code snippets of the web scrapping code used to scrap retailer websites for the data available in the prototype.
- Testing and Feedback results: We will make available the results of the testing surrounding the web scrapping code, as-well as the testing of the prototype function and feedback from test users.
- Database Design: We will be building a prototype database for the prototype application

Scope Limitations:

Below is a list of limitation and boundaries of the current scope. Due to resource and time constraints many of the functions and deliverables will be limited compared to their final version if had complete the project and its phases in its entirety.

- The price comparison function will source prices from a minimum of 2 retailers. As this is all that is required to produce a proof of concept for our capabilities to scrap data. Additional retailer price may be included in the submitted prototype but is outside of current scope and subject to resource availability

- Products available on the prototype where pricing and product data can be viewed will be limited to a minimum of dozen products. Again, we feel this is enough to establish a proof of concept. Gathering the data from the product manufacturer may not be possible within the time allotted so we may have to manually input the product for the scrapper to match against. Any additional products displayed in the final prototype is outside of current scope.
- Product Categorization will be limited to the following 3 electronic categories laptops, tablets, and phones. Each category will have 2-6 subcategories. Additional Categories may be added but outside of scope of current project
- Wireframes will be limited to the following pages
 - Home page
 - Search
 - Product
 - Login
- The product Roadmap will feature the roadmap to Phase 5 of the project, beyond that is outside current scope.
- Web scrapper code available as a deliverable will merely be an example of the code that can be used by another to test and confirm the functionality of it, it is not necessarily a representation of the full code used on the prototype application
- Testing and feedback. Testing of the prototype site will be limited to 25 users' likely other university students; the test will confirm the site is function that they're able to retrieve pricing listed on the site are accurate as-well as to provide feedback of what they think of the premise of B2B. The testing of the web scrapping code will be limited to being able to manually run the code and retrieve pricing data from a single source from at-least 2 products.
- Database Design deliverables will be limited to the data dictionary, entity relationship diagram and SQL scripts including schema, pre-population with selected data from web scrapper, and queries for testing purposes.

Out of scope:

All other objectives, functions & Features, deliverables mentioned throughout this report that aren't explicated listed in the above scopes and limitations are outside the current scope of this project. At a high level this includes but not limited to the below

- A prototype of the mobile applications and any of its features
- Forum features
- A functioning login portal
- Cost analysis/Financials of the project
- Monetization effort of the website
- Marketing Campaign
- Price Alert function

Tools and technologies

Below is a list of tools and technologies we have used throughout the Bang 4 Buck Project. This is non-exhaustive list. There are lots of others. This just highlights what we believe to be the most heavily used/important tools and technologies used throughout the project so far

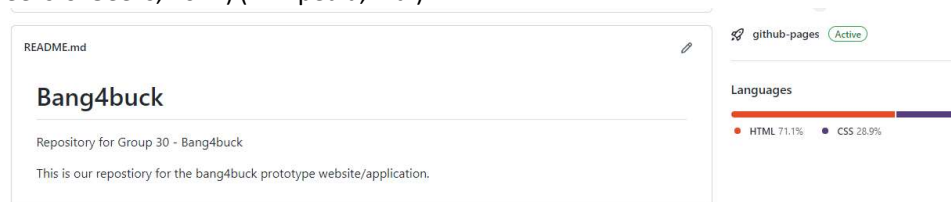
- **MySQL Community Server:** Is a relational database management system. We required one to build our prototype database we selected MySQL because it is popular database management system, our team have had prior experience with it, it is open source, reliable, scalable, and fast. We used version 8.0.30 (MySQL, 2022)

```

1  /*
2   Date: 8 August 2022
3   Author: Meg Manoni
4   Purpose: Uniform DDL schema for RMIT Assessment of Bang 4 Buck
5  */
6
7  -----GET ALL PRODUCTS FROM THE GOOD GUYS-----
8  -----
9
10
11 SELECT DISTINCT
12   Product.*
13 FROM
14   [tblProduct] Product INNER JOIN
15   [tblStoreProduct] StoreProduct ON [FKProductID] = Product.[ID] INNER JOIN
16   [tblStore] Store ON [FKStoreID] = Store.[ID]
17 WHERE
18   Store.[Name] = 'The Good Guys'
19 ;
20
21
22
23 -----GET ALL PRODUCTS FROM LAPTOPS CATAGORY-----
24 -----
25
26 SELECT DISTINCT
27   Product.*
28 FROM
29   [tblCategory] Category INNER JOIN
30   [tblProduct] Product ON [FKCategoryID] = Category.[ID]
31 WHERE
32   Category.[Name] = 'Laptop'
33 ;
34

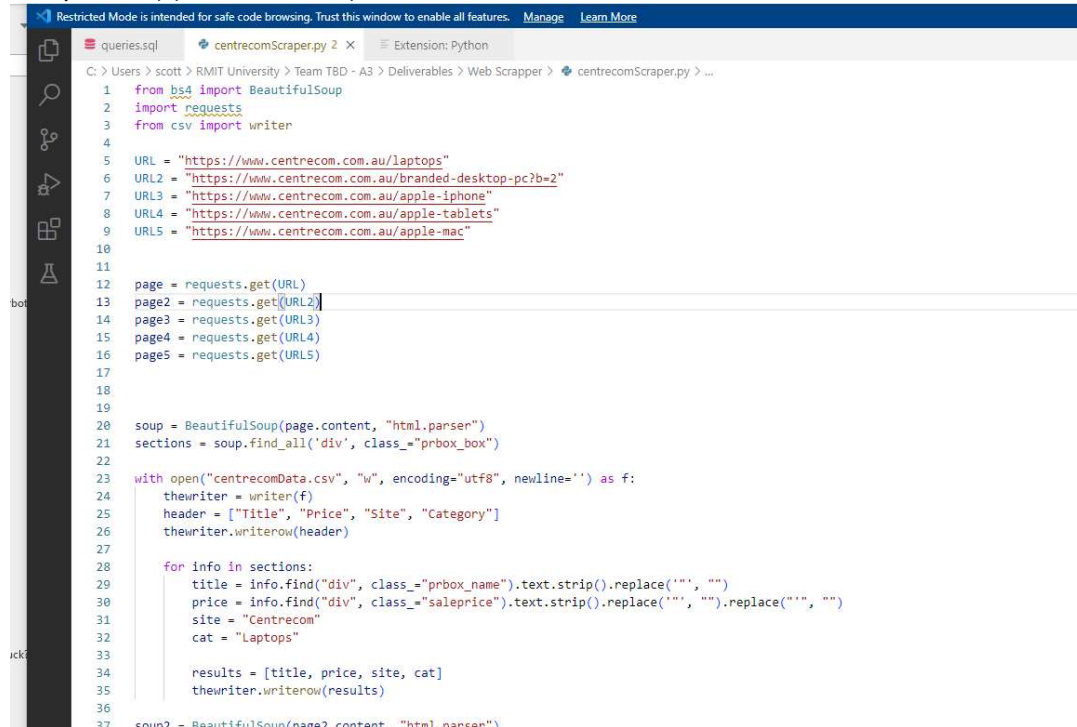
```

- **WebStorm by JetBrains:** Was the primary text/code editor used throughout project for several members of the team for a multitude of tasks including coding the team website, the prototype website etc.
- **Visual studio code:** A source code edited developed by Microsoft that can be used with a variety of programming languages such as JavaScript, python, C++, Rust. Visual studio code uses the same editor component seen within Azure DeVops. We used version 1.70.2. (Wikipedia, 2022). This was used to build the SQL scripts and test them.
- **Front end development:** we used HTML, CSS, for both the team and prototype website. (GeeksforGeeks, 2022) (Wikipedia, n.d.)



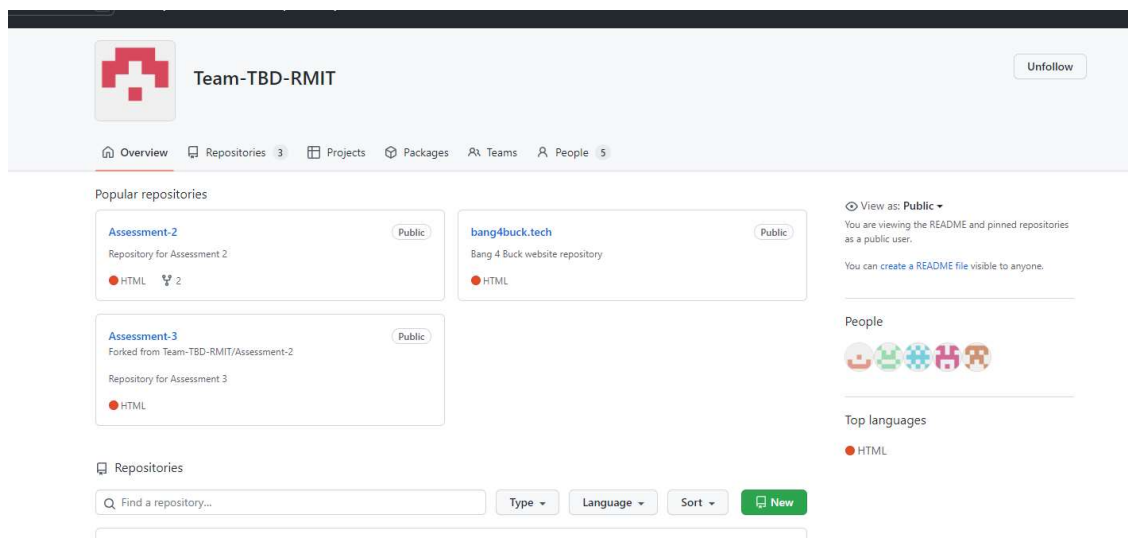
- **Python:** We used python to create the Web Scrapper that scrap product and pricing data from various website such as Jw.com.au to populate into our prototype website. Python is a popular high-level general-purpose language used for a range of purposes such as web development, automation, and data analysis. We used version 3.8 of python (Analytics

Vidhya, 2017) (Coursera, 2022)



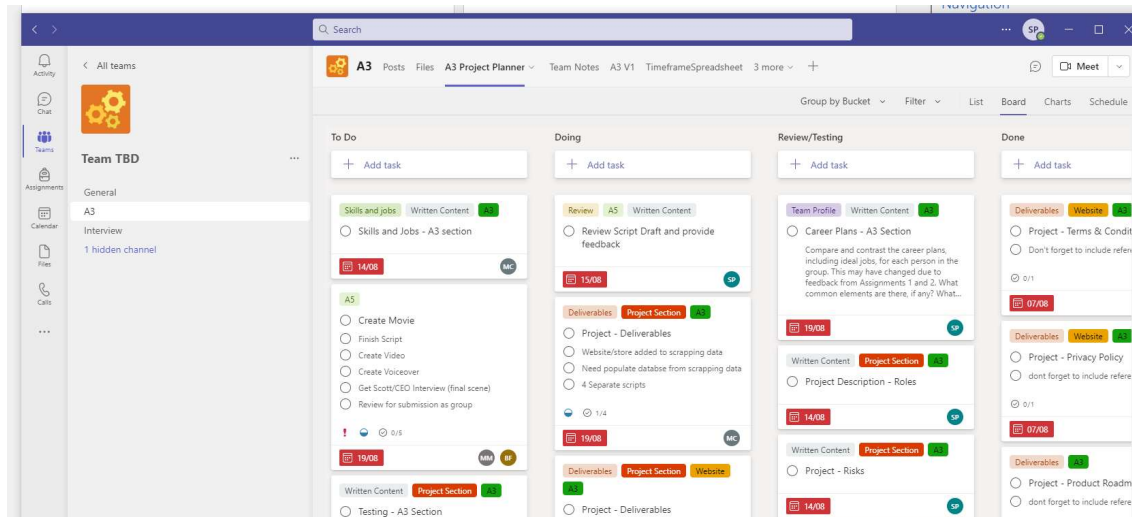
```
1 from bs4 import BeautifulSoup
2 import requests
3 from csv import writer
4
5 URL = "https://www.centrecom.com.au/laptops"
6 URL2 = "https://www.centrecom.com.au/branded-desktop-pc?b=2"
7 URL3 = "https://www.centrecom.com.au/apple-iphone"
8 URL4 = "https://www.centrecom.com.au/apple-tablets"
9 URL5 = "https://www.centrecom.com.au/apple-mac"
10
11
12 page = requests.get(URL)
13 page2 = requests.get(URL2)
14 page3 = requests.get(URL3)
15 page4 = requests.get(URL4)
16 page5 = requests.get(URL5)
17
18
19
20 soup = BeautifulSoup(page.content, "html.parser")
21 sections = soup.find_all('div', class_="prbox_box")
22
23 with open("centrecomData.csv", "w", encoding="utf8", newline='') as f:
24     thewriter = writer(f)
25     header = ["Title", "Price", "Site", "Category"]
26     thewriter.writerow(header)
27
28     for info in sections:
29         title = info.find("div", class_="prbox_name").text.strip().replace("'", "")
30         price = info.find("div", class_="saleprice").text.strip().replace("'", "").replace(" ", "")
31         site = "Centrecom"
32         cat = "Laptops"
33
34         results = [title, price, site, cat]
35         thewriter.writerow(results)
36
37 <script> = BeautifulSoup(page2.content, "html.parser")
```

- **GitHub:** We used GitHub heavily for both our team and prototype website. This was used as version control for our codes for both websites. We also used it to host both websites temporarily via GitHub pages. GitHub is primarily a version control hosting service using GIT which is a distributed version control. Primary used for software development version control. It is a popular website, now owned by Microsoft. It has many features and functions including such as GitHub page which allow you to effectively host your own website through them. (Wikipedia, 2022)



- **Microsoft Teams:** We have used this heavily and it is an integral part of the project process. We've used it to communicate with team members, collaborate using a variety of its features and

functions, such as screen sharing, working on documents simultaneously. We have used to track the progress of our tasks and project using the planner and SharePoint lists. Microsoft Team as seen above is a communication and collaboration tool made by Microsoft that has lot of features and functions and integration with other Microsoft application such as office suite, SharePoint etc.



Testing

Throughout the project build, testing was integrated within the development process along each stage of deliverable development that was subjectable to testing parameters, as well as continual debugging along the way. The following two spreadsheets demonstrate the testing process that was followed, with PASS and FAIL parameters to accurately test functionality of the database and web scraper in their sandbox environments.

[DBT01_QueryExecutionResults.xlsx](#)

[WST01_TestExecutionResults.xlsx](#)

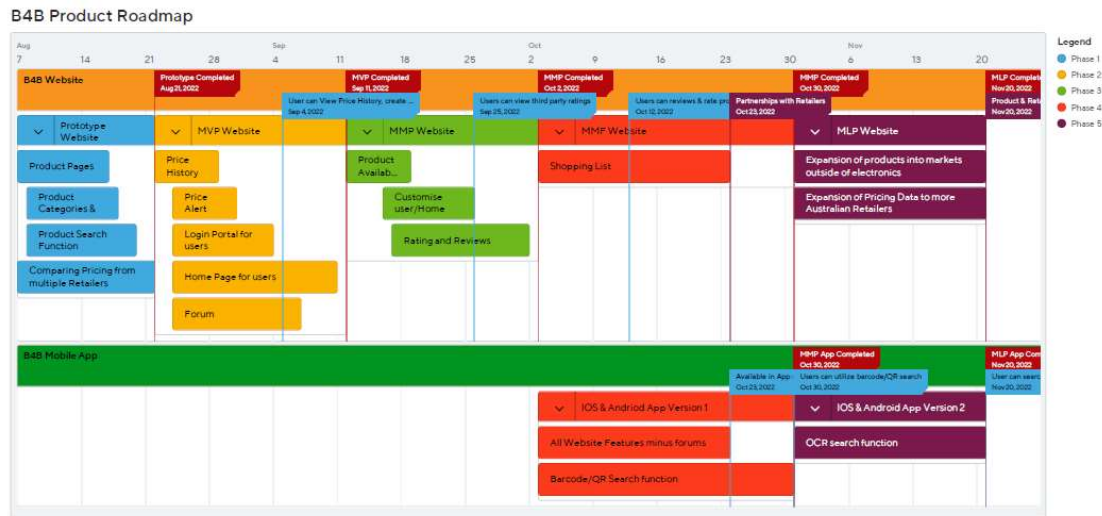
These tests would be continually implemented at each stage of the development process and multiple test ID's and differing parameters would be fed through to optimize program efficiency and debug as much as possible before releasing the BETA test to a select group. User testing was planned when the database, website and web scraping tool were fully operational as one entity, but unfortunately due to time constraints this was not achievable.

Timeframe

Overview:

Below you'll see two sections, a product roadmap with when we expect to complete all 5 stages of this project plan as-well as a timeframe tabling, how Team TBD have and will have spent the first 15 weeks of this project. The two use somewhat different date ranges we the reality is we do not have the resources to complete all stages of the project including all the planning required before beginning the project to be completed within 15 weeks highlighted in the timeframe. Both the timeframe and roadmap are based off the idea that each member will have approximately 10 hours a week to work on the Bang 4 buck project.

Product Roadmap:



Timeframe:

WEEK	SCOTT	MEG	BRONAGH	MALACHI
1 (11th July-17th July)	Meeting and Collaboration around project: 2 hours Planning Assignment 3, tasks, requirements etc. : 2 hours	Meeting and Collaboration around project: 2 hours Planning Assignment 3, tasks, requirements etc. : 2 hours	Meeting and Collaboration around project: 2 hours Planning Assignment 3, tasks, requirements etc. : 2 hours:	Meeting and Collaboration around project: 2 hours Planning Assignment 3, tasks, requirements etc. : 2 hours
2 (18th July - 24th July)	Review A3 Doc: 30 minutes Setup A3 Draft Report: 30 minutes. Meeting and Collaboration around project: 2 hours	Icon Design: 2 Hours GitHub Form: 5 minutes Review A3 Doc: 30 minutes Meeting and Collaboration around project: 2 hours	Reviewed Project: 10 minutes Brain stormed AT5 ideas: 10 minutes Reviewed A3 Doc: 20 minutes Meeting and Collaboration around project: 2 hours	Review A3 doc: 5 minutes Review slogan and design: 30 minutes Meeting and Collaboration around project: 2 hours
3 (25th July-31st July)	Written content: 2 and 1/2 Repository fork: 20 mins. Meeting and Collaboration around project: 2 hours	Website artifacts: 3 hours Website additional design: 2 hours Database design: 4 hours Storyboard Initial Design: 2 hours Restoring GitHub repositories from backup: 2 Hours	Website artifacts: 2 hours Meeting and Collaboration around project: 2 hours	Web scraper program: 8 hours Meeting and Collaboration around project: 2 hours

4(1st-7th)	Written content(Aims): 1 hour Product Roadmap: 2 hours Terms and conditions and Privacy policy creation: 40 minutes Meeting and Collaboration around project: 2 hours Mail Server/Email account setup: 60 minutes	Script and storyboard draft for submission: 3 hours Website prototype build: 5 hours Database build & design: 4 Hours Meeting and Collaboration around project: 2 hours	Script and storyboard: 2 hours Meeting and Collaboration around project: 2 hours Meeting and Collaboration around project: 2 hours	Web scraper program: 2 hours Meeting and Collaboration around project: 2 hours
5(8th-14th)	Written Content(Career plan, Roles, Risks): 3 hours: A5 Outro draft script: 30 minutes Meeting and Collaboration around project: 2 hours Research: 30 minutes Setup Mail email accounts for other users B4B: 20 minutes	Website prototype build: 4 Hours Database Build & finalize: 1 hour Testing DB: 1 hour Meeting and Collaboration around project: 2 hours	Script: 1 hours , Wireframe app: 1 1/2 hour A5 Recording: 1 hour Meeting and Collaboration around project: 2 hours	Web scraper program: 12 hours Meeting and Collaboration around project: 2 hours
6(15th-21st)	Written Content(Tools, tools and technologies etc): 2 hours Review A3 V2: 40 minutes Meeting and Collaboration around project: 2 hours Timeframe: 1 hour Review and feedback A5 Script: 40 minutes	Meeting and Collaboration around project: 2 hours Website prototypes build & finalize: 4 hours Assessment website build & finalize: 4 hours	A5 presentation: 2 hours Meeting and Collaboration around project: 2 hours	Web scraper program: 2 hours Meeting and Collaboration around project: 2 hours

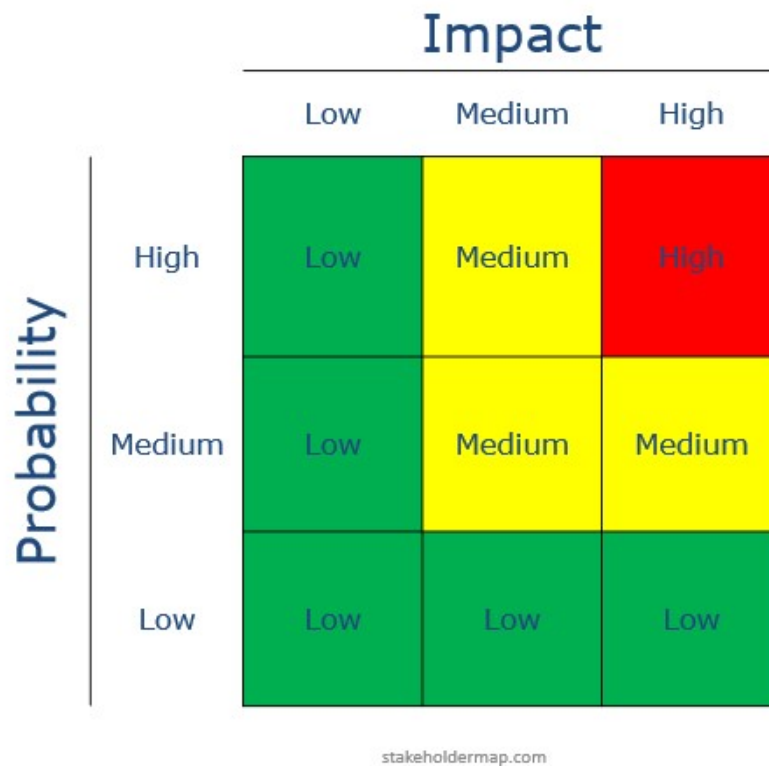
7(22nd-28th)	Overseeing overall project: 2 hours Meeting: 2 hours Assisting team members with MVP Website tasks and deliverables: 4 hours Review & Testing: 2 hours	Overseeing Development team: 3 hours Meeting: 2 hours Developing and working on MVP Website tasks and deliverables: 4 hours Review and Testing: 1 hours	Meeting: 2 hours Developing and working on MVP Website tasks and deliverables: 6 hours Review and Testing: 2 hours	Meeting: 2 hours Developing and working on MVP Website tasks and deliverables: 6 hours Review and Testing: 2 hours
8(29th-4th)	Overseeing overall project: 2 hours Meeting: 2 hours Assisting team members with MVP Website tasks and deliverables: 4 hours Review & Testing: 2 hours	Overseeing Development team: 3 hours Meeting and collaboration: 2 hours Developing and working on MVP Website tasks and deliverables: 4 hours Review & Testing: 1 hour	Meeting: 2 hours Developing and working on MVP Website tasks and deliverables: 6 hours Review and Testing: 2 hours	Meeting: 2 hours Developing and working on MVP Website tasks and deliverables: 6 hours Review and Testing: 2 hours
9(5th-11th)	Overseeing overall project: 2 hours Meeting and collaboration: 2 hours Assisting team members with MVP stage tasks and deliverables: 4 hours Testing: 2 hours	Overseeing Development team: 3 hours Meeting: 2 hours Developing and working on MVP Website tasks and deliverables: 4 hours Testing: 1 hours	Meeting: 2 hours Developing and working on MVP Website tasks and deliverables: 6 hours Review and Testing: 2 hours	Meeting: 2 hours Developing and working on MVP Website tasks and deliverables: 6 hours Review and Testing: 2 hours
10(12th-18th)	Overseeing overall project: 2 hours Meeting and collaboration: 2 hours Assisting team members with MMP Website stage tasks and deliverables: 2 hours Testing: 2 hours Community Engagement: 2 hours	Overseeing Development team: 3 hours Meeting: 2 hours Developing and working on MMP Website tasks and deliverables: 4 hours Review & Testing: 1 hours	Meeting: 2 hours Developing and working on MMP Website tasks and deliverables: 2 hours Review and Testing: 2 hours Marketing and advertising: 2 hours community engagement: 2 hours	Meeting: 2 hours Developing and working on MMP Website tasks and deliverables: 6 hours Review and Testing: 2 hours

11(19th-25th)	Overseeing overall project: 2 hours Meeting and collaboration: 2 hours Assisting team members with MMP Website tasks and deliverables: 2 hours Testing: 2 hours Community Engagement: 2 hours	Overseeing Development team: 3 hours Meeting: 2 hours Developing and working on MMP Website tasks and deliverables: 4 hours Review & Testing: 1 hours	Meeting: 2 hours Developing and working on MMP Website tasks and deliverables: 2 hours Review and Testing: 2 hours Marketing and advertising: 2 community engagement: 2 hours	Meeting: 2 hours Developing and working on MMP Website tasks and deliverables: 6 hours Review and Testing: 2 hours
12(26th-2nd)	Overseeing overall project: 2 hours Meeting and collaboration: 2 hours Assisting team members with MMP stage tasks and deliverables: 2 hours Testing: 2 hours Community Engagement: 2 hours	Overseeing Development team: 3 hours Meeting and collaboration: 2 hours Developing and working on MMP Website tasks and deliverables: 4 hours Review & Testing: 1 hours	Meeting: 2 hours Developing and working on MMP Website tasks and deliverables: 2 hours Review and Testing: 2 hours Marketing and advertising: 2 community engagement: 2 hours	Meeting: 2 hours Developing and working on MMP Website tasks and deliverables: 6 hours Review and Testing: 2 hours
13(3rd-9th)	Overseeing overall project: 2 hours Meeting: 2 hours Assisting team members with MMF Website tasks and deliverables: 2 hours Community Engagement: 2 hours Engaging/meeting and tendering with perspective partnerships: 2 hours	Overseeing Development team: 3 hours Meeting: 2 hours Developing and working on MMF Website tasks and deliverables: 2 hours Developing and work on MMF App Tasks and deliverables: 2 hours Review & Testing: 1 hours	Meeting: 2 hours Developing and working on MMF Website tasks and deliverables: 2 hours MMF App Tasks and Deliverables: 2 hours Review and Testing: 2 hours Marketing and advertising: 2	Meeting: 2 hours Developing and working on MMF Website tasks and deliverables: 3 hours MMF App Tasks and Deliverables: 3 hours Review and Testing: 2 hours

14(10th-16th)	Overseeing overall project: 2 hours Meeting and collaboration: 2 hours Assisting team members with MMF stage tasks and deliverables: 2 hours Community Engagement: 2 hours Engaging/meeting and tendering with perspective partnerships: 2 hours	Overseeing Development team: 3 hours Meeting: 2 hours Developing and working on MMF Website tasks and deliverables: 2 hours Developing and work on MMF App Tasks and deliverables: 2 hours Review & Testing: 1 hours	Meeting: 2 hours Developing and working on MMF Website tasks and deliverables: 2 hours MMF App Tasks and Deliverables: 2 hours Review and Testing: 2 hours Marketing and advertising: 2 hours	Meeting: 2 hours Developing and working on MMF Website tasks and deliverables: 3 hours MMF App Tasks and Deliverables: 3 hours Review and Testing: 2 hours
15(17th-23rd)	Overseeing overall project: 2 hours Meeting and collaboration: 2 hours Assisting team members with MMF stage tasks and deliverables: 2 hours Community Engagement: 2 hours Engaging/meeting and tendering with perspective partnerships: 2 hours	Overseeing Development team: 3 hours Meeting: 2 hours Developing and working on MMF Website tasks and deliverables: 2 hours Developing and work on MMF App Tasks and deliverables: 2 hours Review & Testing: 1 hours	Meeting: 2 hours Developing and working on MMF Website tasks and deliverables: 2 hours MMF App Tasks and Deliverables: 2 hours Review and Testing: 2 hours Marketing and advertising: 2 hours	Meeting: 2 hours Developing and working on MMF Website tasks and deliverables: 3 hours MMF App Tasks and Deliverables: 3 hours Review and Testing: 2 hours

Risks

We have created a risk matrix tasks to showcase the identified potential risk of these projects, as well as their mitigation steps we will take, likelihood of occurring and the impact if they do occur.



Risk	Mitigation	Likelihood	Impact
Web-Scraper is unable to scrap required data	Conduct various testing to ensure the Scraper code can scrap data of required data	High	High
Failure to meet deadlines and deliver artefacts	Project plan created. Tasks with deadlines tracked and team meets regularly to review progress.	Medium	Medium
Issues with prototype website cloud servers to function with website	We are prepared to create a local webserver if we're unable to get our prototype functioning in the cloud	Low	High
Components of website failure to work as intended	Conduct various testing to ensure components work as required if not remove from prototype and fall back to earlier artefacts (i.e., wireframes)	High	Low

Group Processes and Communications

How did the group communicate?

The group communicated through Microsoft Teams. All communication excluding instances where the non-communication escalation matrix is implemented will be conducted through MS team. This includes via Team meeting and using the post and chat functions within Microsoft Teams.

How often did meetings take place

MS Teams official meetings – 2 meetings a week on Monday and Thursday at 7pm (Melbourne time).

MS Teams impromptu meetings – 1 meeting a week for general catchup and discussion about project, between whole group and individual components contributors

MS Teams Milestone/Deadline meetings – When milestone have been completed or deadlines have been approached that do not fall within the normal official meeting schedule. The team will conduct special meeting to review and discuss the milestone or deadline outcome.

What happened when a group member does not respond to communications?

We have introduced an escalation matrix for the team regarding a lack of communication. This matrix has been designed to attempt to give members who do not communicate every opportunity to respond before remainder of the team are required to reach out to faculty. All members have reviewed this escalation Matrix and agreed to it. Members aren't required to communicate every day, but this matrix comes into the effect from the first meeting missed where the member has not prior notified anyone else on the team that they would not be attending.

Immediately: Member is pinged/tagged by another member in team channel post to see if they're available to make the meeting. Member is noted as non-communicated absence in the attendee list of the meeting notes.

24 hours: Another member will reach out to the member via Microsoft Team chat

48 hours: Another member will reach out to the member again via Team Chat as-well via text if member has divulged their number

72 hours: An email is composed, agreed upon by the rest of the team and sent to the member reaching out check in to see if they're okay.

96 hours: Our meeting are roughly every 4 days at this point the member will obviously if they have still not communicated be in that meeting either. Their continued absence will be discussed in the meeting and the team will start discussing the possibility of reassigning the members workload and who will likely be responsible for what if they don't communicate. Any tasks that have an impending deadline will be immediately reassigned to another member. At this stage an email will be drafted to the faculty

120 hours: The email notifying the faculty of the team communication issue with this member will be sent.

192 hours: If the member has not communicated, they will have missed their 3rd meeting. As a result, the team will have no choice but to treat the member as having left the team. Their workload will be re-assigned, and the team members will continue ahead with the assignment as if the member was no longer a part of the team until communication stating otherwise has been received.

Skills and jobs

Full Stack Developer

Bang4Buck is seeking a full-stack developer to join our professional and high-performance team. We are seeking a person who is knowledgeable about the front & back end of web development and is excited to work in an industry-leading company.

This is an entry level position suitable for those who have had short-term work experience in

the industry or who have completed studies in the relevant area. Applicants who have no experience or qualifications but have a passion and willingness to learn will not be disqualified.

Seeking candidates who can demonstrate:

- Foundational knowledge of HTML & CSS (three months to one years' experience preferred)
- Foundational knowledge of SQL (three months to one years' experience preferred)
- Foundational knowledge of Git, GitHub, and source control. (Three months to one years' experience preferred)
- A continual improvement of their skills, both personal and professional
- The ability to work independently from a remote location but within a wider team.
- The capacity or potential to work under pressure and towards deadlines.
- Good communication and time management skills.
- Prior history or knowledge of online communication services such as Discord and Microsoft Teams.

About us:

Bang4Buck is a ground-breaking new platform that offers price comparison services from a range of websites, brands and fields. Outdistancing our competitors by offering a service that is both web- and app-based, allowing users to readjust their budget both on-the-fly and in-store.

As a full-stack developer you will be expected to:

- Develop and maintain the front-end of our web service, focusing on simplicity-of-use and user experience.
- Develop and maintain the back-end of our web service, liaising with the software engineer about database implementation.
- Participate in weekly developmental meetings, actively participating in a friendly and helpful manner.
- Host meetings at least once a month for a status review.
- Update or review daily a task manager such as Sprint/Kanban boards, Microsoft Teams' Planner or the Trello service.
- Conduct yourself in a professional and courteous manner when dealing with clients and customers.

Bang4Buck is 100% online, allowing any individual with internet access and the above criteria to fulfil this job position. We at Bang4Buck pride ourselves on our inclusivity and do not discriminate based on gender, sexuality, ethnicity, nationality or pizza topping preference.

Systems engineer

Bang4Buck is seeking a systems engineer to join our professional and high-performance team. We are seeking an individual who is enthusiastic about programming and ready to get stuck in at a moment's notice.

This is an entry level position suitable for those who have had short-term work experience in the industry or who have completed studies in the relevant area. Applicants who have no experience or qualifications but have a passion and willingness to learn shall also be accepted.

Seeking candidates who can demonstrate:

- Foundational knowledge of Python (three months to one years' experience preferred)
- Foundational knowledge of CSV files.

- Foundational knowledge of Git, GitHub and source control. (Three months to one years' experience preferred)
- A continual improvement of their skills, both personal and professional
- The ability to work independently from a remote location but within a wider team.
- The capacity or potential to work under pressure and towards deadlines.
- Good communication and time management skills.
- Prior history or knowledge of online communication services such as Discord and Microsoft Teams.
- Problem solving skills, unafraid to think outside the box as well as exploring all options within the box.

About us:

Bang4Buck is a ground-breaking new platform that offers price comparison services from a range of sites/distributors and other stuff. Outdistancing out competitors by offering a service that is both web- and app-based, allowing users to readjust their budget on-the-fly and in-store.

As systems engineer you will be expected to:

- Develop and maintain the web scraper program that forms the heart of our service.
- Liaise with the web developer concerning database and extraction protocols.
- Participate in weekly developmental meetings, actively participating in a friendly and helpful manner.
- Host meetings at least once a month for a status review.
- Update or review daily a task manager such as Sprint/Kanban boards, Microsoft Teams' Planner or the Trello service.
- Conduct yourself in a professional and courteous manner when dealing with clients and customers.

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Project Manager

Bang4Buck is seeking a project manager to join our professional and high-performance team within the IT industry. We are seeking a person who is eager to lead and ready to hit the ground running.

This is an entry level position suitable for those who have had short-term work experience in the industry or who have completed studies in the relevant area. Applicants who have no experience or qualifications but have a passion and willingness to learn shall also be accepted.

Seeking candidates who can demonstrate:

- Foundational knowledge of team and project management (three months to one years' experience preferred)
- Grounded knowledge of the IT industry.
- Foundational knowledge of Git, GitHub and source control. (Three months to one years' experience preferred)
- The willingness to lead.
- A continual improvement of their skills, both personal and professional

- The ability to work independently from a remote location while shepherding a team from across the country.
- The capacity to bring out the potential in others, assisting and encouraging them to better themselves as teammates and as human beings.
- Excellent communication and time management skills.
- Prior history or knowledge of online communication services such as Discord and Microsoft Teams.
- Compassion and empathy, the ability to understand a problem or issue from multiple perspectives.
- The discipline and skill to crack the whip during crunch time.
- Excellent organisation and time management skills, the discipline and finesse team progression through tasks without applying undue stress to your teammates.
- Ability as a producer: knowing when to bend and when to break; the want to try out new ideas, knowing that not all will succeed while continually improving.

About us:

Bang4Buck is a ground-breaking new platform that offers price comparison services from a range of sites/distributors and other stuff. Outdistancing out competitors by offering a service that is both web- and app-based, allowing users to readjust their budget on-the-fly and in-store.

As project manager you will be expected to:

- Oversee the team's work and productions
- Be available to be spoken to have a pleasant disposition and be open to communication as well as being able to respond in short order.
- Lead the team by default - you should know everything on the agenda without having to check it: it's for the benefit of others, not the host.
- Participate in weekly developmental meetings, actively participating in a friendly and helpful manner.
- Host meetings by default but certainly not all the time.
- Update or review daily a task manager such as Sprint/Kanban boards, Microsoft Teams' Planner or the Trello service.
- Conduct yourself in a professional and courteous manner when dealing with clients and customers.

Bang4Buck is 100% online, allowing any individual with internet access and the above criteria to fulfil this job position. We at Bang4Buck pride ourselves on our inclusivity and do not discriminate based on gender, sexuality, ethnicity, nationality or pizza topping preference.

Community manager

Bang4Buck is seeking a community manager to join our professional and high-performance team. We are seeking someone who thrives on communication and genuine personal interaction.

This is an entry level position suitable for those who have had short-term work experience in the industry or who have completed studies in the relevant area. Applicants who have no experience or qualifications but have a passion and willingness to learn shall also be accepted.

Seeking candidates who can demonstrate:

- A general knowledge of the IT industry.
- The capacity to respond quickly to user feedback while relaying urgent concerns to the development team.
- Marketing experience or education to utilise advanced techniques to engage with the public.
- A continual improvement of their skills, both personal and professional
- The ability to work independently from a remote location but within a wider team.
- The capacity or potential to work under pressure and towards deadlines.
- Good communication and time management skills.
- Prior history or knowledge of online communication services such as Discord and Microsoft Teams.

About us:

Bang4Buck is a ground-breaking new platform that offers price comparison services from a range of sites/distributors and other stuff. Outdistancing out competitors by offering a service that is both web- and app-based, allowing users to readjust their budget on-the-fly and in-store.

As community manager you will be expected to:

- Liaise with the development team to know what new services are being developed.
- Engage with customers on the forums and social media.
- Build a social media presence across multiple platforms such as Facebook, Instagram, etc.
- Participate in weekly developmental meetings, actively participating in a friendly and helpful manner, bringing up feedback and concerns from the user base.
- Update or review daily a task manager such as Sprint/Kanban boards, Microsoft Teams' Planner or the Trello service.
- Conduct yourself in a professional and courteous manner when dealing with clients and customers.

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Group Reflection:

Bronagh Falloon:

What went well

Team communication had improved, and it was easy ask for help or get feedback on part of the assignment. Team meeting helped clarify any issues and make plans to complete the work. Roles were clearly defined and helped us to work effectively as team.

What could be improved

Concrete plans to reach each milestone we set for ourselves. We did not reach all the goals we had initially set for ourselves partly due to failing to have set dates for each milestone.

At least one thing that was surprising

It surprised me well our team continued to work together and fill in gaps as needed based on what needed to get done and if anyone got overwhelmed. I thought after working together for longer issues may have come up that were not obvious earlier.

At least one thing that you have learned about groups

I think I continued to learn the same lesson I learned during the last assignment. To communicate with my team and build trust with each other so that we can work together effectively.

Malachi Cleland:

What went well

The entire A3 project. We set a goal and timetable, stuck mostly to it, adapted when we couldn't get things done in time and pulled through to make a very nice, finished product.

What could be improved

My personal work ethic. Although I started as I meant to go on, I noted that my work ethic weakened and began to slacken as we approached the due date. Much of this can come down to my own uncertainty when it comes to my skills and moments of perceived difficulty of the task before me.

At least one thing that was surprising

The continuing positivity and good work ethic displayed by the team even at the end of things. While I found myself lacking in this area - though I consider myself to have improved in a team setting since the last assignment - having worked in other groups, I know that things can fall away at the end, whereas we did pulled through and didn't let up.

At least one thing that you have learned about groups

How other people learn and the way they do things (and how it matters to me). Seeing their skills in action demonstrates how capable they are. It's one thing to have a person assigned a task, quite another to see them in action. The usefulness of this is knowing that they are as skilled as - or better than - you expected, as well as providing an appreciation of how they go about a task.

Meg Maroni:

What went well

With the group utilizing the team task planner agenda more, it felt like tasks progression and understanding each members roles was a much more streamlined experience compared to that of A2. It did require a bit more effort and attention to be paid towards the Teams page to ensure the tasks are getting ticked off and assigned within an appropriate timeframe as they are completed or appear, but it was still a beneficial effort necessary for our success.

What could be improved

I feel as a team we were slightly too ambitious with the deliverables with this project, and I interpret that as us being inexperienced in creating a project like this before, as all team members have the capable skills to pull this project together and really get a functioning web application together but just lack of available time, balancing work-study-life relationships.

What was surprising

Even though we over-extended our scope, we managed to complete most of the deliverables with everyone's hard work and dedication.

What I have learned about groups

That even when I feel like I am failing the group by being behind on deliverable due dates, they have been incredibly supportive and assist with tasks when overburdened by external factors. I have been incredibly fortunate to work with this group of amazing individuals and hope to keep my friendships and work opportunities with them as my studies continue.

Scott Percival:

What went well:

I believe this time around our communication was stronger. We better utilized the outlined group processes more which included better utilizing the planner in and out of the meeting process to track tasks. We utilized checklist to review over-all progress towards ensure deliverables were completed. Over-all I think this assignment was better managed by all members than the previous.

What could be improved:

We could have improved by better outlining and understanding the scope of our deliverables for the project at the start. We underestimated how long some components would take to get on top of.

At least one thing that was surprising

Time is always an issue no matter how well you plan. We had initially planned to get further in the project with the time we had than we did. Sometimes things happen and with experience, we better learn how to not just plan for them but work through them.

At least one thing that you have learned about groups

The duality of it. Some days I would have preferred to just have to deal with individual assignments, other days I was glad to be working on something as a group. It can be frustrating at times but ultimately rewarding. I could not have achieved the quality of work that I believe I contributed without the support of the group. I have enjoyed working with this team and hope I get the chance to do so again in the future.

Group:

What went Well

Several of us had done and our individual reflection prior to our group reflection discussion. It was rewarding to see that everyone commented on the improved and more dedicated use of the planner and how effective it was in managing the tracking task progression. After our discussion we all agreed communication was over-all stronger, team found it was easier to ask for help or get feedback. That the roles and responsibilities throughout this assignment were more clearly defined than last assignment and that all our group processes including our meets improved our experience of this assignment. We all agree the assignment was managed by all individuals over-all.

What could be improved

Again, even prior group reflection discussion it seems our members were in sync with one and other regarding the area we could have improved upon. We all felt agree the area of improvement for this assignment was centred around our initial deliverables/Milestones of the project. We were ultimately too ambitious with the amount of work we had set out for ourselves. Upon discussion we believe there was several reasons to our fail to deliver on our ambitious outcomes such as lacking more concise timeline/dates for our milestones, we found ourselves being reactive instead of proactive. If we had mapped a timeframe/timeline before instead of during this could have helped. We also could have been clearer in defining those deliverables and milestones with each member to make sure everyone fully understood what was involved in those deliverables and milestones. We chalked it up to inexperience in both managing and working in a project of this scale and type.

At least one thing that was surprising

The team found it surprising how little project/team related issues we had and how we still managed to complete most of our deliverables despite being overly ambitious in our initial scope and underestimating just how much time we'd require to complete some deliverables or how much time we'd have in general as we ended up with less time to work on our project then we had initial given ourselves due to us requiring balancing work, study, life relationships and obligations. Everyone worked hard, everyone supported each other and helped with each other roles.

At least one thing that you have learned about groups

Even When the communication is good things can always be improved with better communication. . We learnt that the benefits of working in a group outweigh the negative when in a good team that communicates. We all enjoyed working with each other and hope to continue our relationships and get the opportunity to together in the future again.

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