Team Information

Team Name and Team Photo

Team Name: Brute Force

Team Photo:

Team Membership

Team Members	Member Email	Contact Detail (Whatsapp Number)	Personal technical and professional strengths	Personal Fun Fact
Huang Guo Yue Yang (32022891)	ghua0010@student.monash.edu	+60 11-3625 2865	Frontend	Sleep for 18 hrs in one day
Kuah Jia Chen (32286988)	jkua0008@student.monash.edu	+60 17-382 1933	Backend	Drink coffee everyday
Tee Shun Yao (32193130)	stee0005@student.monash.edu	+60 12-350 6866	Deep learning	Can sleep through fire alarm
Ong Di Sheng (31109667)	dong0009@student.monash.edu	+60 19-862 4288	UI / UX Design	Former district badminton player

Our team consists of 4 members, Yue Yang, Jia Chen, Shun Yao, and Di Sheng. Three of us are computer science students and Yue Yang is a software engineering student. The difference in background and skills increases the potential of the team as we can help and learn from each other.

Shun Yao is in his third year and he is interested in developing further in the AI field. Although this is not closely related to this unit, he thinks that this unit can teach him some useful skills and this makes him take the unit. As a formal professional chess player, it is also an interesting experience for him to develop a board game with good design from scratch after playing a lot of online chess games.

Meanwhile, Di Sheng is a final-year student with a strong foundation in machine learning and is passionate about applying it to solve real-world problems. He loves to continuously expand his skillset and network with professionals in the field. At the same time, he is excited to launch his career and eager to contribute his expertise to a dynamic team in the data science industry.

Furthermore, Jia Chen is a highly driven final-year data science student who is eager to apply his knowledge to tackle practical problems. With a solid background in mathematics, machine learning, data visualisation, and data wrangling, he has an ability for picking up fresh relevant knowledge rapidly. He is eager to advance his knowledge of software engineering through this unit and plans to use what he learns to further his professional goals.

Lastly, Yue Yang is a third-year student with a passion for software development. She has a solid understanding of programming languages, software development methodologies, and database management. She is excited to be a part of this unit, as it will help her enhance her skills and knowledge in software development, and enable her to achieve her goals of excelling in this field.

Team Schedules

Regular meeting schedule

- Our team will have two regular meetings each week. The Thursday meeting will be held offline in the classroom, while the Saturday meeting will be held online via Zoom starting at 1 pm.
- During the Thursday meeting, we will discuss any challenges or obstacles that team members are facing and come up with solutions to overcome them.
- The primary topics of the Saturday meeting will be going over completed work and setting goals for the upcoming week.
- By having these regular meetings, we expect to stay on track and ensure that everyone is contributing to our shared objectives.

Regular work schedule

- Tasks will be distributed to team members after each weekly meeting based on their unique strengths and workload. Unless there is a special circumstance, the tasks assigned to the meetings will typically be due by the following Thursday.
- Team members will discuss progress on tasks regularly via WhatsApp to ensure that tasks are finished on time. Team members will also be encouraged to seek assistance or explanation if they run into problems or difficulties.
- We intend to remain on plan and make sure that everyone is contributing to our common objectives by adhering to this regular work schedule.

How work will be distributed

- Work will be distributed according to sections in the specification to make sure that everyone on the team contributes equally. Each team member will be in charge of a particular section and work on it separately, but they will be encouraged to work together and request assistance when necessary. Additionally, we'll make sure that each team member works in each section.
- If there is an especially light workload in one section, one team member will be tasked with proofreading the entire document. This individual is in charge of making sure that all sections are flawless and adhere to the team's standards.

- We want to make sure that everyone on the team feels involved in making contributions to the project and that the workload is distributed fairly by using this distribution approach

Technology Stack and Justification

1) Programming Language for Back-end: Java

   Justification:
   Django, Node.js, and Java were the three programming languages we took into consideration for back-end development. Eventually, we decided to choose Java for a variety of reasons after considering the benefits and drawbacks of each language.

   Pros:

- Java is an established and frequently used language with a large ecosystem of modules and tools.
- Java is a solid and reliable choice for creating large-scale systems because it is a strongly-typed language that supports strict data typing and object-oriented programming rules.
- The foundation of Java, the Java Virtual Machine (JVM), abstracts away platform-specific information and allows the execution of Java programmes on any machine that supports the JVM. Therefore, it is a flexible and approachable language choice.
- Java has strong security features built-in, making it a safe choice for creating applications that manage sensitive data.
- Java is a language with high performance, which is necessary for creating scalable, high-traffic web apps.

   Cons:

- Java's strict typing and object-oriented programming principles make it more difficult to master than some other languages.
- Given that Java can be verbose in comparison to other languages, some developers may find their code to be longer and more difficult to comprehend.
- Java can be memory-intensive, which can limit its performance in certain use cases.

Despite these drawbacks, there were a number of reasons why we decided to use Java for back-end development. Firstly, all four members of our team have prior coursework-related experience in Java OOP development (i.e., FIT2099), which will allow us to get started with development right away. Second, Java is a powerful, dependable language with outstanding

community support and strong platform independence. This will make it a safe and handy choice for our project.

We are sure that by using Java for back-end development, we can build a strong, scalable, and high-performing system that will satisfy the requirements of our project.

2) Programming Language for Front-end: Java with Swing GUI

   Justification:
   After considering several front-end technologies, including React and Java Swing, we have decided to use Java with the Swing GUI library for the following reasons:

   Pros:

- Java is already familiar to many team members, and developing Swing GUIs requires little prior knowledge.
- A powerful and adaptable set of components are available with Java Swing to create desktop applications.
- Since Java Swing has been around for a while, it is an established technology with a reliable API and extensive documentation.
- Java is a cross-platform language, which enables the execution of the same code across various OSs.

   Cons:

- Being an older technology, Java with Swing might not be the best option for modern web programming.
- Java and Swing are mainly used to create desktop applications, not web applications.

Despite these drawbacks, our team's experience with Java and the short learning curve for Swing GUI development led us to choose Java with Swing for front-end development. We can construct a user-friendly and responsive interface for our application using Java Swing's robust collection of components for developing desktop applications.