Week 2 Tutorial

COMP10001 – Foundations of Computing

Semester 1, 2025

Clement Chau

Get to know myself

Clement Chau (he/him)

3rd Year BSc, majoring in Computing and Software Systems

Was part of the 2023S1 Cohort of COMP10001 (You guys are 2025S1 cohort!)

Avid Esports enthusiast. If I'm not working nor studying, I'm on my computer watching ongoing games or playing games with friends.

Head of Technical for MUE (Melbourne University Esports). VAL/CS2/Rivals/League/MLBB etc etc! Part of the university's val team last sem =)

Get to know yourself

- Name
- Year, Semester, Course
- Choose one (or all) of:
  - Fun fact about yourself
  - Your hobbies/Interests (What do you do in your free time?)
- Choose one (or all) of:
  - Favorite Game
  - Favorite Movie
  - Favorite Place you've visited outside of your city

Where can COMP10001 take me?

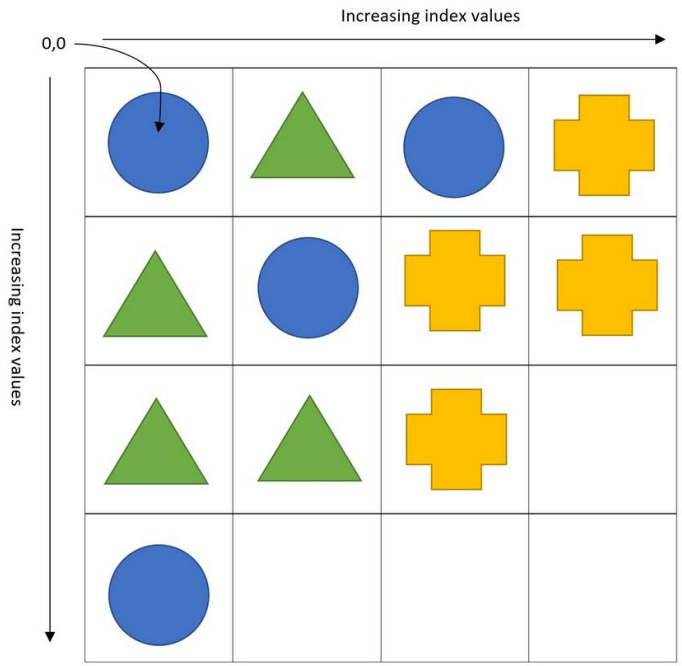
- Foundations of Computing introductory video
- Software engineer
  - Building websites, apps
- Data scientist/analyst
  - Amazon recommendations, Google search engine
- AI/ML Engineer
  - Chatbots such as ChatGPT, DeepSeek
- Game Development
- Other types of engineering
  - Electrical Engineering, Robotics
- And so much more…

Programming is a very transferrable skill to any field and any career

2 years ago,

Project 1 – Matching game

```
board = [['B', 'G', 'B', 'Y'],
['G', 'B', 'Y', 'Y'],
['G', 'G', 'Y', 'Z'],
['B', 'Z', 'Z', 'Z']]
```

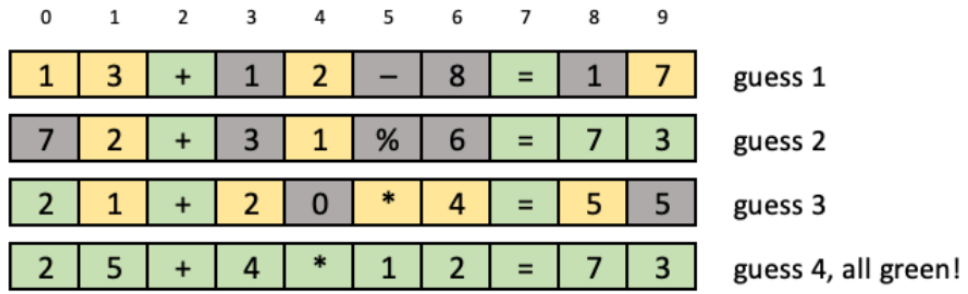


Our representation

Project 2 – FoCdle

The *difficulty* of a **FoCdle** is measured by its length in total characters.

For example, here is a trace of a person solving a **FoCdle** of difficulty 10. In their first guess they tried the 10-character equation "`13+12-8=17`" and learnt (from the green cells) what the first operator was and where it was located, and got the location of the "=" correct. They also learnt (from the yellow cells) that there were at least one each of the digits 1, 2, 3, and 7 (plus for each of those digits, they learnt one character position in which it did *not* appear); and they learnt (from the grey cells) that there was only a single instance of 1, that the second operator wasn't subtraction, and that there were no 8 digits anywhere.



Example 1

From that information they formed their second guess "`72+31%6=73`" and submitted it. The response from that told them that the computed value had to be 73; that second operator wasn't "`%`" either; that there were no 6s, only one 7, and only one 3; plus also told them some more positions in which the digits 1 and 2 (which must occur somewhere) could not appear.

Academic Integrity

- Where **NOT** to get help
  - Online
    - Forums, External Tutor
    - You *can* post it on Ed, but make it **PRIVATE!**
  - ChatGPT, DeepSeek, etc
  - 'Friends'

In the past we have given penalties such as:

- Zero (0) for the assignment.
- Zero (0) for the subject.
- Termination of enrollment from the University.

IMPORTANT: If in doubt regarding what's allowed and what's not, **ASK THE TEACHING STAFF.**

Getting Help

- Tutorials (2nd hour)
- First Year Centre in Level 3 Melbourne Connect
  - Opens 9am to 5pm every day (**bring your student card!!!**)
  - COMP10001 tutors will be there at 12pm to 2pm
  - I will be there on Mondays and Wednesdays
- Ed Discussion forums
- Revisiting lectures and workshop materials in Canvas
  - Consolidation lectures every other Friday
- *PASS (Peer Assisted Study Sessions)*

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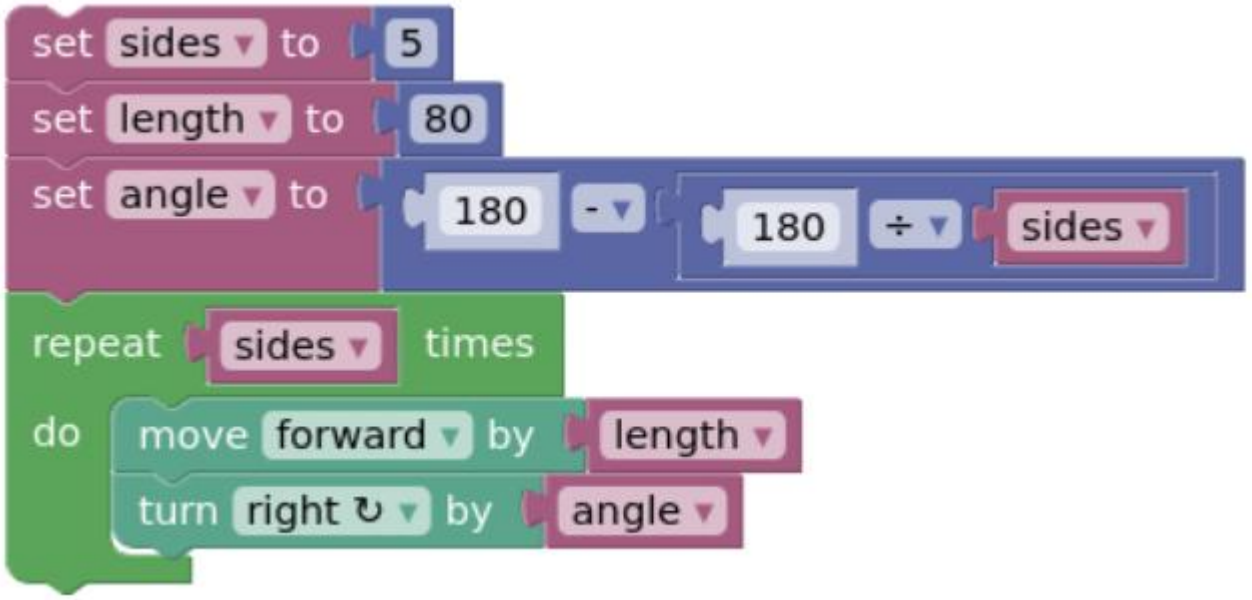
Bingo time!

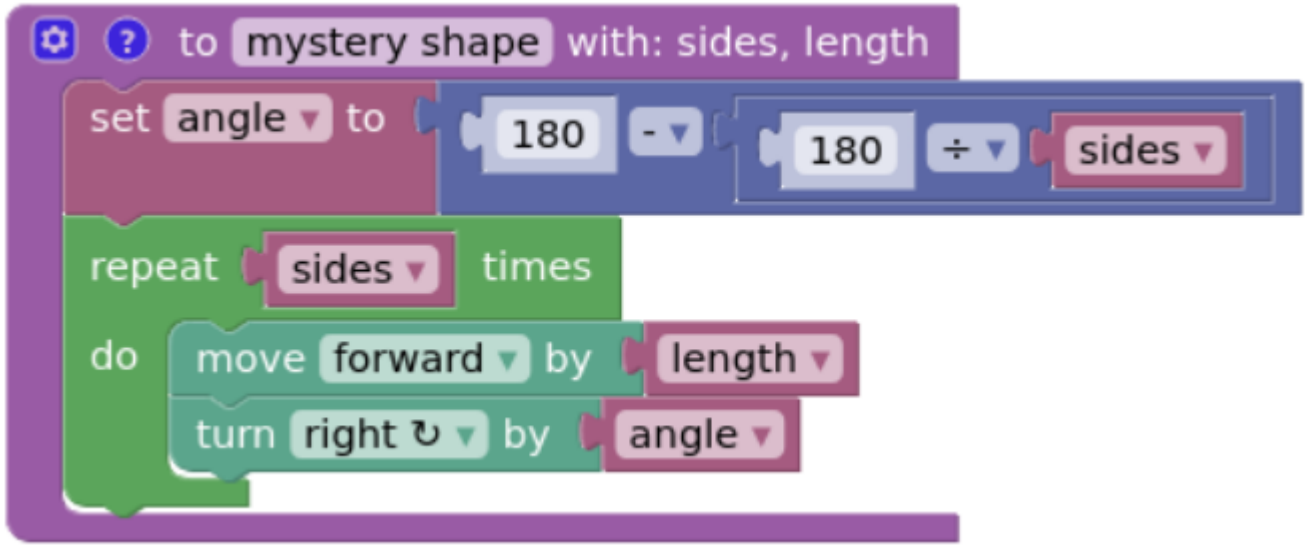
Find 3 things that your table has in common

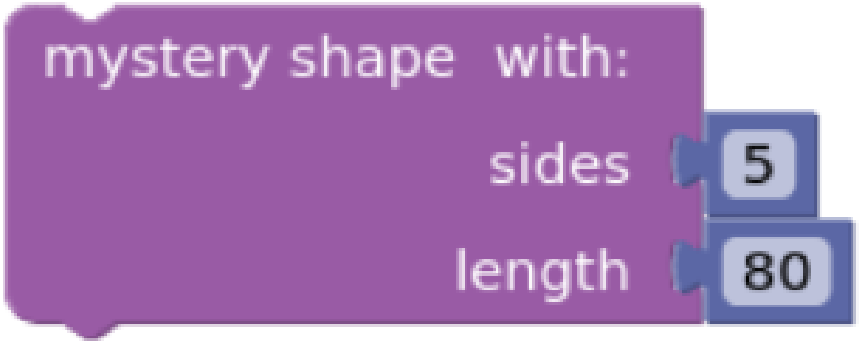
Blocky Turtle!

Can we do this more effectively?



Can we make it *even* better?



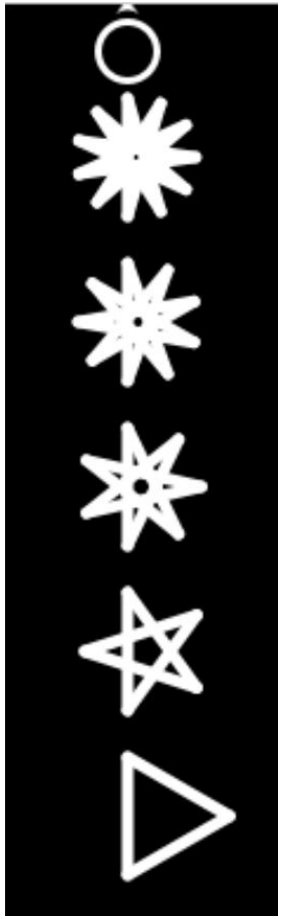


Challenge!

```
pen up
move backward by 170
pen down
set sides to 3
repeat 5 times
do
    mystery shape with:
        sides sides
        length 50
    pen up
    move forward by 70
    pen down
    change sides by 2
```

What does this draw?

This is a tricky one!



Independent work

- Do worksheets 1 and 2 on Ed
  - Remember that **Ed worksheets are assessed** and contributes to **10% of your total score**!
- Raise your hand if you have any questions!