Competition Rules

- Navigate from start cell to end cell.
- Floor paths are chequered (black and white).
- Some floors will be coloured to indicate when there is a wall that can be open; this opens a shortcut.
- All cells in the maze are accessible.
- Size of the robot is 25cm x 25cm.

Maze Rules

- When reaching the destination, blink the LED on the robot for 1/1s.
- Time limit of 8 minutes to complete the course, with maximum 3 attempts.
- Gate colour green, blue, purple and yellow.
- Cell 6x6 maze, all cells accessible.
- We can access shortcuts on the way out but must send a unique message to a given MAC address.
    - Also need to blink the LED for 3 seconds.

GATE COLOUR	MESSAGE (as a char)
Blue	'2'
Green	'3'
Purple	'4'
Yellow	'5'

- Qualification Maze opens at 1:15 pm Saturday.

Timeline

Task	**Breakdown**	**Deadline**
Building	Gearbox	12 PM
	Body design	2 PM
	Wiring set up	3 Pm → finalise hardware
Calibrate	Ultrasonic (Ryan)	12PM
	Light sensor	
	Motor speed	
	Bluetooth	
Localisation	Go straight with position control	5 PM
	Store cell data/coordinate	Aim for 5Pm
	Consistent displacement/localisation	Sunday
Steering race	Optimal movement	*(OPTIONAL)*

Finalise		LAST 2 HOURS

Note:

1. Breakdown functions → MAKE SURE EACH WORK
    - Use C++ library header (.h) files
    -

2. Worse scenarios:
    - Hitting the wall:
        - Way to know that
        - Go back?
    - Tilted movement
        - Way to adjust
            - Motor speed
            - Ultrasonic localising

3. Function