

- **Target deliverables:** Manufacture the ball-catching mechanism
- **Person in charge:** Lim Yap Khye
- **Expected time:** Sunday (4 May 2025)
- **Challenges:**

1. Finalise the ball-catching mechanism.
2. Ensure the manufactured part is precise.
3. A lot of trial and error, and it takes a lot of time.

- **Target deliverables:** Manufacture the body of the vehicle
- **Expected time:** Sunday (4 May 2025)
- **Challenges:**
  1. Deciding which materials to use (Cardboards, Wood, Acrylic, 3D printing, etc)
  2. Ensuring the precision of the manufactured parts.
  3. Ensure the weight distribution is even.

- **Target deliverables:** Coding the start-stop operation and operating the process.
- **Person in charge:** Kieran Paul Bhasker
- **Expected time:** Sunday (4 May 2025)
- **Challenges:**
  1. Correct Timing and Synchronization:  
Ensuring that the start and stop signals are properly synchronized with the system's current state to avoid unexpected behaviors (e.g., starting when already running, or stopping mid-critical operation).
  2. Debouncing Start-Stop Signals:  
Dealing with multiple unwanted activations if using physical buttons or noisy input sources (debounce filtering needed in code).

- **Target deliverables:** Dimensioning the base and combining the wheels together.
- **Person in charge:** Keziah Sinnadurai
- **Expected time:** Sunday (4 May)
- **Challenges:**

#### **Load Distribution:**

Ensuring the base can evenly support the entire weight of the system (motors, battery, chassis, payload) without sagging or twisting.

#### **Correct Sizing:**

Determining a base size that is wide and long enough to provide good stability, but not oversized so it becomes heavy and hard to maneuver.

1. Motor driver
2. Voltage regulator
3. Motor
4. Bolts
5. Nuts