**MEC2402 Project Milestones 1 (Week 6)**

- **Target deliverables:** Responsible for CAD modelling and 3D printing the components needed for the ball-collecting mechanisms. Sourcing parts for ball-collecting mechanisms.
- **Person in charge:** Lim Yap Khye
- **Expected time:** Sunday (13 April 2025)
- **Challenges:**
    1. 3D printed parts might need to undergo further fine tuning due to issues such as material shrinkage and printer tolerances.
    2. Using the wrong material could result in fragile components.
    3. Multiple iterations of 3D printing are necessary to refine the design and achieve a functional final product which may lead to increased time and material usage.

- **Target deliverables:** Conduct research and evaluate various ball-collecting mechanisms in order to determine the most efficient and suitable solution.
- **Person in charge:** Chong Zheng You
- **Expected time:** Sunday (13 April 2025)
- **Challenges:**
    1. The design could potentially require expensive parts or materials which would inflate the budget.
    2. The mechanical complexity of the design could lead to increased probability of failure as it involves more complex moving parts.
    3. The design must be able to collect balls of various sizes which might be difficult to achieve using a one-size-fits-all design.

- **Target deliverables:** Conduct research and evaluate various vehicle movement mechanisms in order to determine the most efficient and suitable solution. Sourcing parts for vehicle movement mechanisms.
- **Person in charge:** Kieran Paul Bhasker
- **Expected time:** Sunday (13 April 2025)
- **Challenges:**
    1. Using the wrong design could lead to the instability or the vehicle being stuck.
    2. Uneven distribution of the wheels may cause tipping or poor maneuverability.
    3. An incorrect use of power transmission can lead to the vehicle moving in the wrong direction.

- **Target deliverables:** Research on how to effectively program Arduino to control motor operations.
- **Person in charge:** Keziah Sinnadurai
- **Expected time:** Sunday (13 April 2025)
- **Challenges:**
    1. Different types of motors require different methods of coding and the wrong one could lead to abnormal behaviour.

2. Coding often requires multiple attempts and trouble shootings which will result in a more time consuming process.