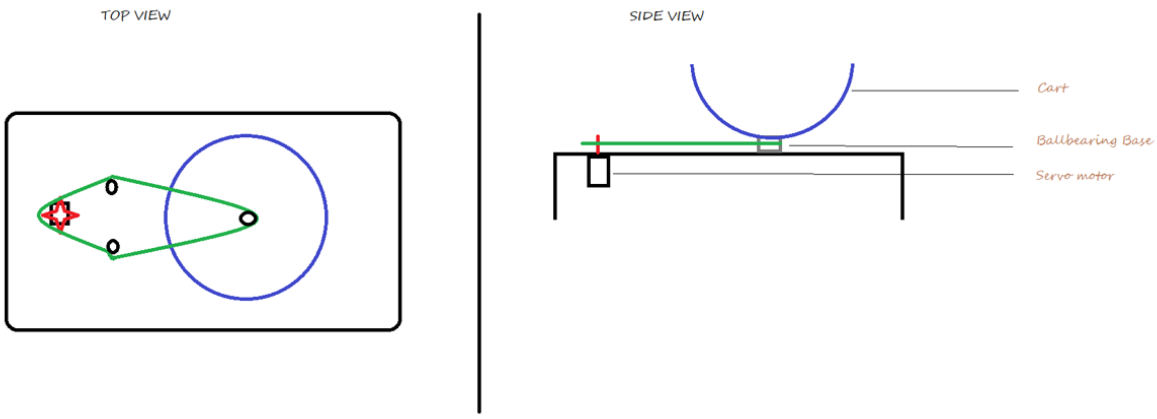
Design of Banana Collector to segregate rotten banana from fresh banana



Materials at hand: 1) Cart to collect banana 2)Servo motor(can rotate at any desired angle)

Modus operandi: Cart will be partitioned; one half will collect the rotten while other will collect the fresh ones. Servo motor will rotate the cart opening the desired half to collect the respective fresh or rotten banana.

Design Requirement: 1) Servo motor demand a sturdy support requires the reliable connection between cart and the servo motor 2) Precise rotation of cart 3)Compat design

Let's review through the literature of servo mounting first for available best practices in design

1)Base Design: The base should have a low center of gravity to prevent tipping during operation. Consider using a wide, flat base for stability.

2)Coupling Mechanism: Employ a rigid coupling (e.g., shaft couplings) between the motor and the cart to ensure precise rotation.

These insights are brought to me from these papers which I am having hard time to find in internet "Designing Effective Servo Motor Mounts" (Smith & Jones, 2020).

"Mechanical Design of Servo Systems"(Brown et al., 2019).

As of now our particular application seems to demand custom engineering on the part of fixing the motor and connecting both motor and cart

Purposed solution:

1)low base table for mounting

2)Mount the servo motor onto the table

3)Mount the cart separate from motor to the table with the rotating ball bearing base

4)Mechanical connection between the motor and cart (roped connection can be a one, but it must be properly explored with the supervision of one with robotics experience)