RoboNox

Problem Statements:-

Whether it is online shopping or items sent to different places, Couriers have proved to be an important part of today's world. Especially In a remote city like Mandi, the significance increases further.

Mandi city courier service wants to automate unloading and separation process for incoming packages based on pincode. Till now this work is done by some people so they want your help to come up with an efficient idea to automate this. The basic workflow is to unload all the parcels one by one from the truck and separate it by pincode and keep it in a different cart according to pincode.

3 carts are straight 50 meter away in a circular arc from the unloading point which is the center of the arc and two adjacent carts make a 30 degree angle from the unloading point. You have to come up with a solution to automate unloading and separating parcels. You may use the same bot for unloading and separation or use different bots for unloading and separation.

Package size: 1 m^3 (maximum)

Marking Scheme:-

1. **Idea** : 30% (including creativity + durability + strength + implementation cost etc)
2. **Design** : 25% (including explanation , different views of model , fairness etc)
3. **Code** : 15% (including comments, proper function naming etc)
4. **Circuit** : 15% (including clean and fair circuit, colour code , components displayed etc)
5. **presentation** : 15% (including proper explanation , proper linkage between design and code working etc)

Note: Make sure to go through the Rulebook once again now.

FAQs

1. Packages are pilled up in truck in multiple rows.
2. Packages are not in fixed shape but maximum size is 1m^3.
3. Teams need not to worry about cart size. It will have sufficient space to store packages.
4. No weight constraints on packages, Team should make it efficient with their cost ratio.
5. Team have do deal with 3 pincodes, one per cart. Pincode is in standard barcode as present in all packages.
6. Bar code can be present any side of the package. Remaining constraints can be assumed by the team.