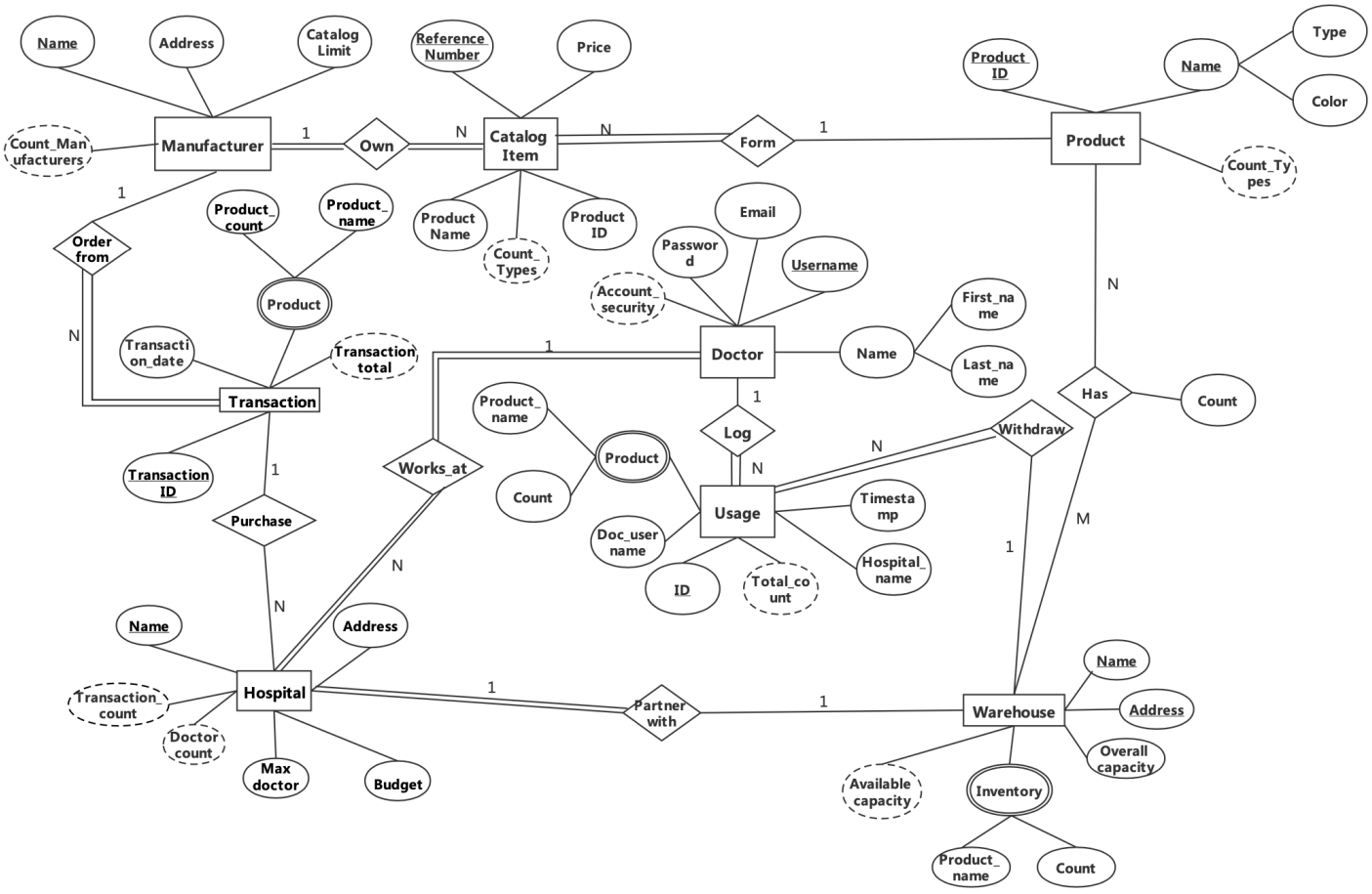
TEAM 3

Phase I

Jinyu Huang(jhuang472)
Siying Cen(scen9)
Ken Xu(hxu323)
Yiting Sun(ysun492)

I. Entity Relationship Diagram



II. Logical Constraints

1. Sum of warehouse inventory count < warehouse overall capacity.
2. Item count in catalog items for each manufacturer < manufacturer catalog limit.
3. 1 <= Doctors work in each hospital < max doctor count for each hospital.
4. Each upcoming transaction total < hospital remaining budget.
5. Each product usage count in usage entity < corresponding product inventory count in warehouse.

III. Assumptions

1. All the manufacturers have to produce products.
2. The initials of manufacturers are unique, so that reference number can be key for “Catalog Item” entity.
3. A usage log must withdraw a specific number of products from the corresponding warehouse.

IV. Notes

1. Inventory count increases with each purchasing transaction and decreases with each doctor withdrawal.
2. Inventory can be null (when a warehouse is not partnered with any hospital).
3. Budget decreases with each transaction: new budget = old budget - transaction total.