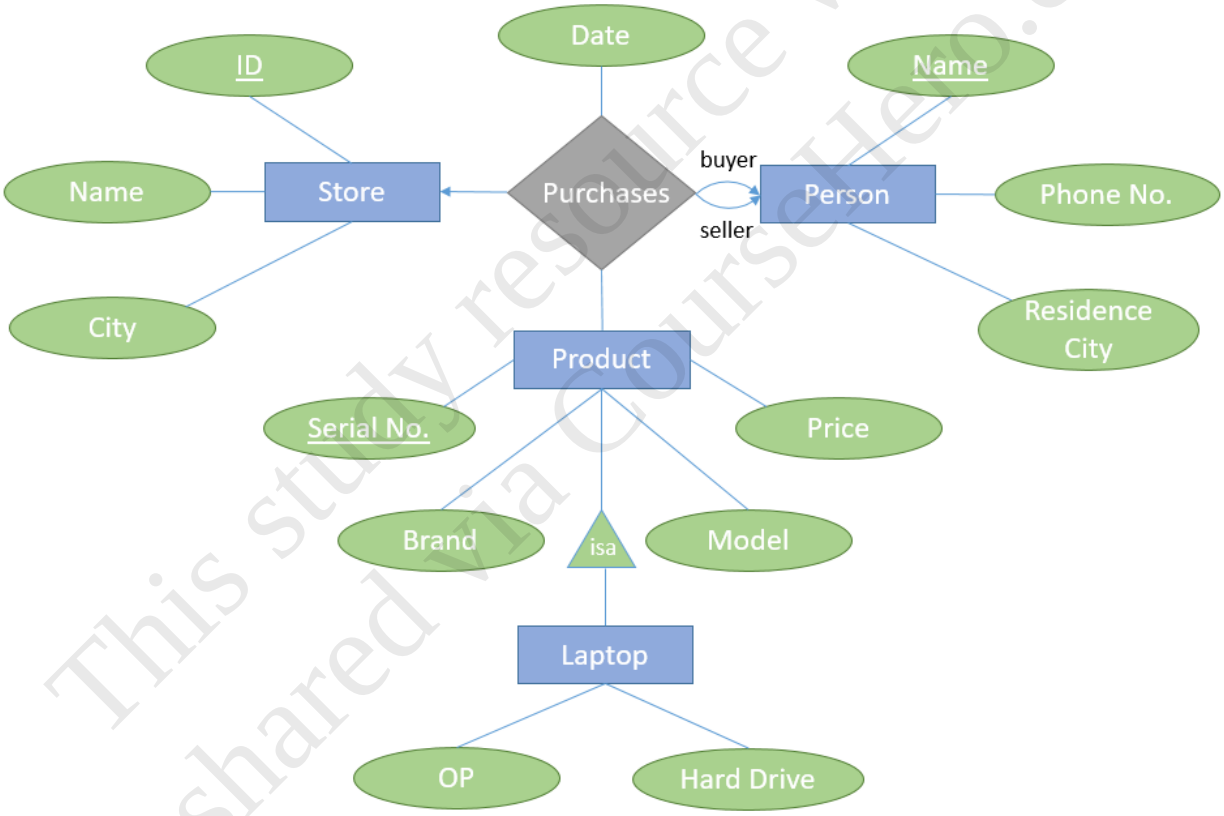
Name: _____ USC ID: _____

Quiz 5: ER Modeling (10 points. 15 minutes)

Please depict an ER diagram to model an application that manages the purchases made at electronic stores, with the following requirements.

- For each **store**, it needs to record its **ID** (unique), **name**, and **city** where the store is located.
- For each **product**, it records its **serial number** (unique), **brand**, **model**, and **price**.
- It also needs to record **operating system** and **hard drive**, but only for **laptops**.
- For each **purchase**, it needs to record the **name of buyer and seller** (i.e., sales person), the **store** where the purchase was made, the **products** purchased, and the purchase **date**.
- For each **buyer** and **seller**, it records his/her **name**(unique), **phone number**, and **residence city**.
- **Note that there can only be one buyer and one seller involved in a single purchase. Also each purchase can be made at a single store. But multiple products may be purchased in the same sale.**

For each entity set, underline its **key attribute(s)**. Properly indicate the multiplicity (i.e., many-one, many-many, or one-one) and type (e.g., is-a) of each relationship.



Each wrong or missing attribute, including underlining key, results in 0.5 point deduction.
Each wrong or missing multiplicity or type of relationship results in 1 point deduction.
Each wrong or missing entity, or use of wrong shape to represent it, results in 1.5 points deduction.