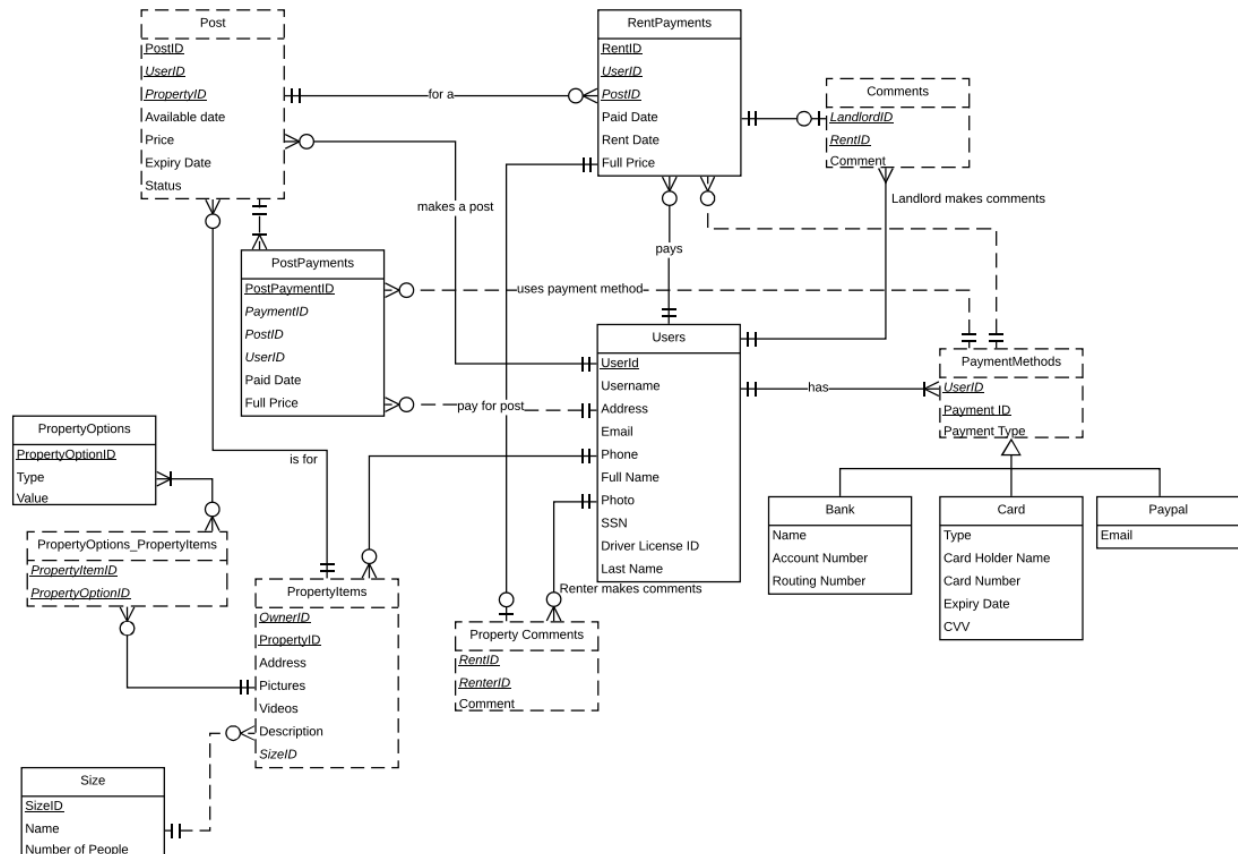


## Homework 1 Solution

*Note: There is no single solution for this homework. The provided ER is just an example of an acceptable solution. The graders should give you points if your ER diagram and report makes sense.*



### Assumptions:

- A renter may make at most one comment for the rent he/she paid for.
- A property owner may make at most one comment for the user who paid the rent.

### Explanations:

- Entity "Users" is used to represent a user in the system, including both property owners and renters.
- Since a user may re-post a post many times, relationship between Posts – PostPayments is 1-N, relationship between Users – PostPayments is 1-N.
- Comments may be included as attributes of Rents (hence, there is no need for Comments and PropertyComments entities). That is acceptable.
- Attribute Status on entity Post may be redundant (the post is active or inactive can be known from the Expiry date).
- Weak entities:

- PropertyItems: A property must be created by a user. A property item cannot exist in the system without its owner.
  - Post: A post must relate to an owner and a specific property.
  - PropertyComments/RentComments: Comments cannot exist without the user who made it or the entity (Property / Rent) it targets to.
  - Payment methods: A payment method is for a specific user and hence, depends on the user.
- Weak relationships: One may exist independently with the other.
  - Property Options – PropertyItems:
  - Size – PropertyItems
  - PayForPost – Users
  - Rent – Users
  - PaymentMethods - PayForPost
  - PaymentMethods – Rent
- Primary key attributes are underlined, while foreign-key attributes are *italic*.