Advanced Software Engineering
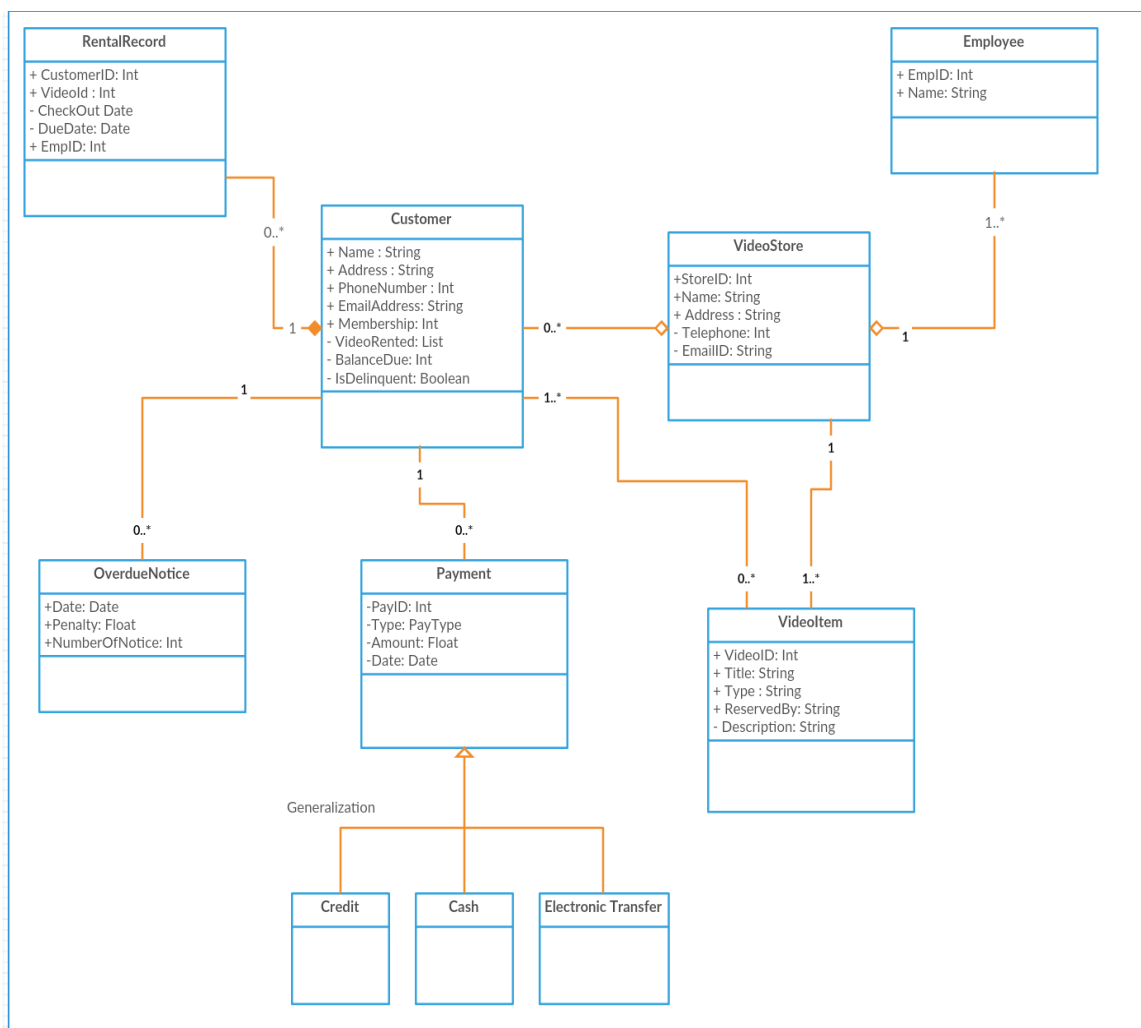# Problem Set -2
(PS-2)

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1. Draw a class diagram for the video store and be sure to label all associations with appropriate multiplicities.

(class diagram is created in creatly)

2. Describe the difference between aggregation and composition relations using the video store.

Aggregation implies a relationship where the child can exist independently of the parent. Example: Class (parent) and Student (child). Delete the Class and the Students still exist.
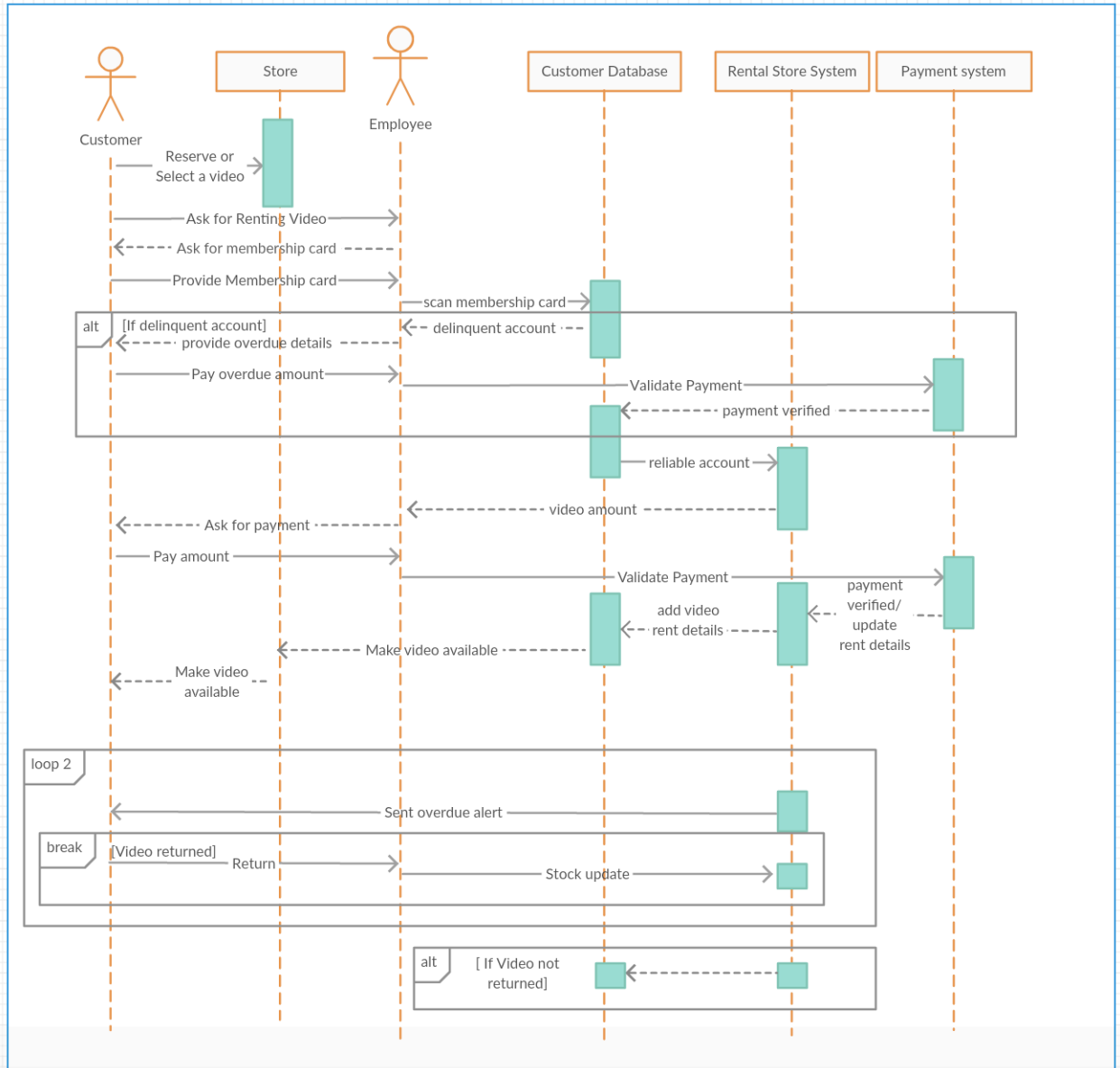

Video store has many employees. Employee can exist if we delete the Video store class, hence it has aggregation relationship.

Composition implies a relationship where the child cannot exist independent of the parent. Example: House (parent) and Room (child). Rooms don't exist separate to a House.
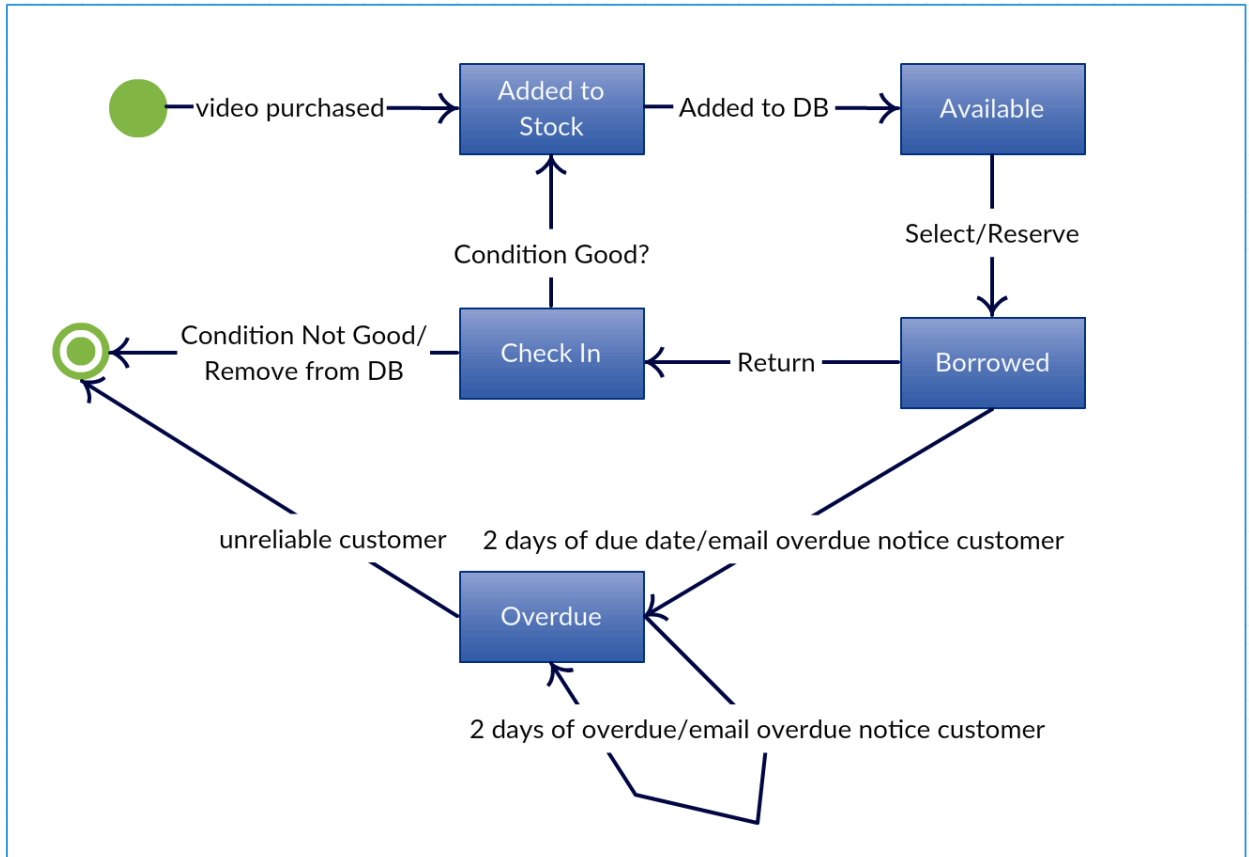

Customer will have some rental record once he rents any video. If customer does not exist, then there will not be any rental record. Hence the classes have composition relationship.

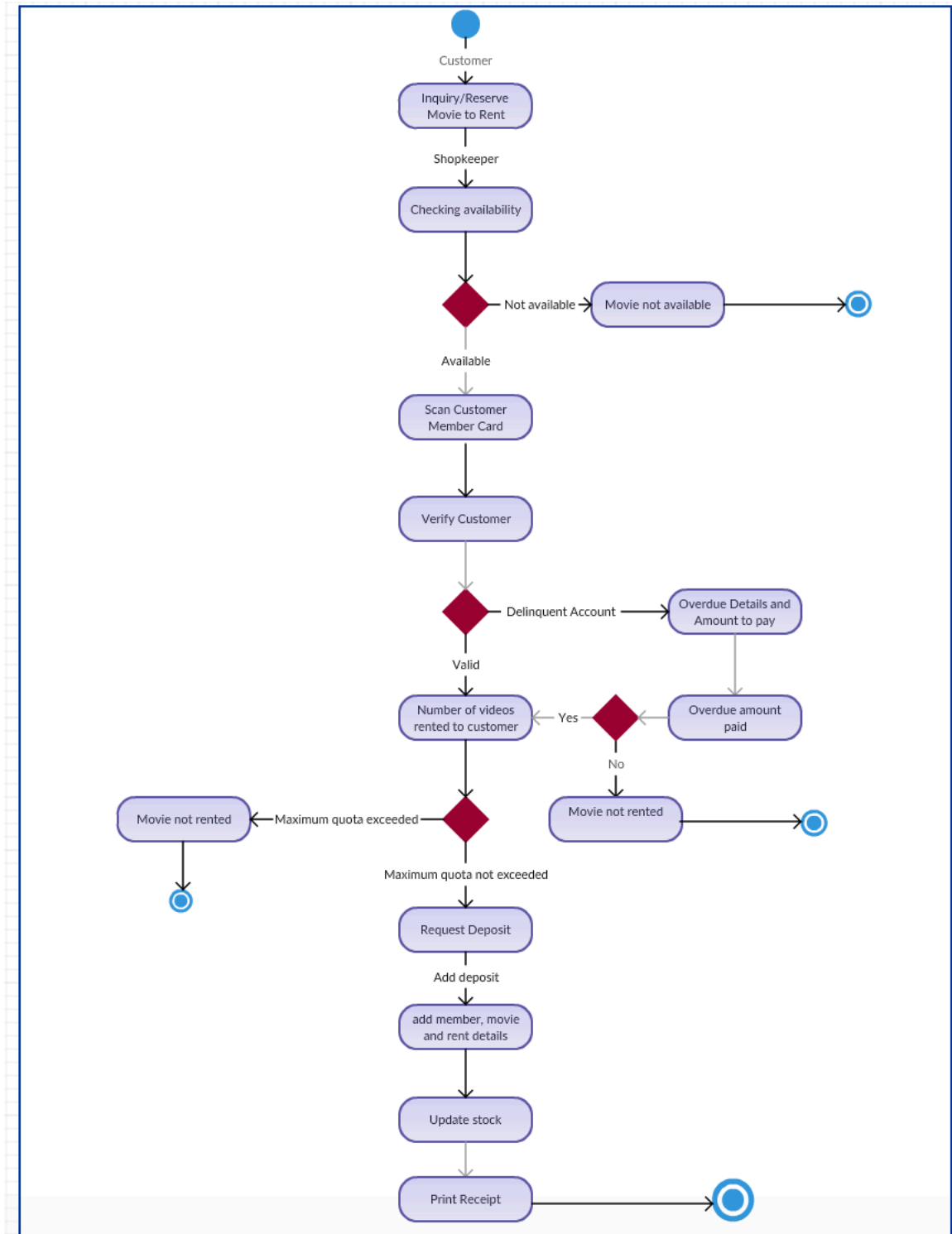3. Draw a sequence diagram for renting a movie from a video store.

(sequence diagram is created in creatly)

4. Draw a state diagram that describes the lifetime of a video tape in a video store.

(sequence diagram is created in creatly)

5. Draw an activity diagram that describes renting a movie from a video store.

(sequence diagram is created in creatly)