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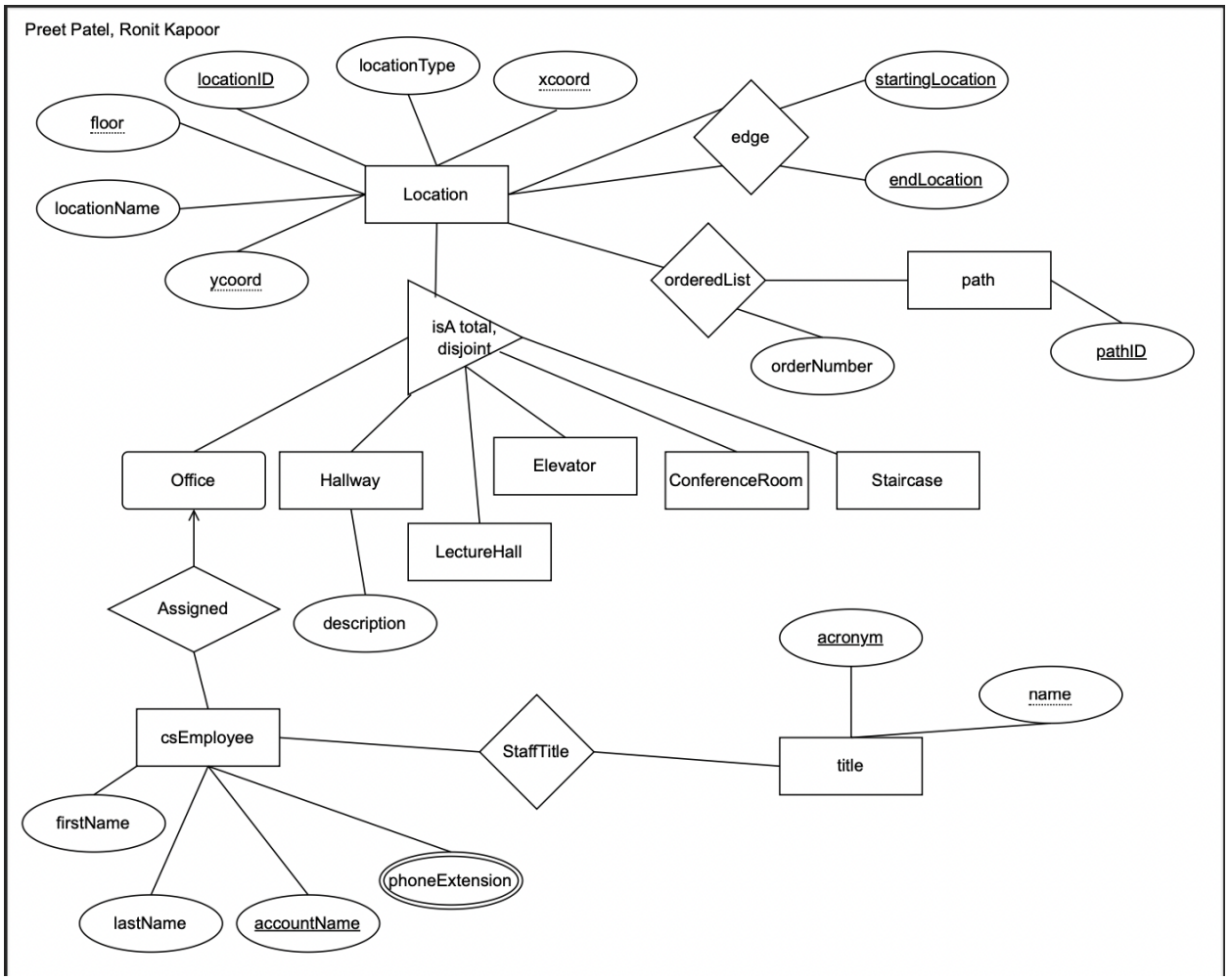

Assumptions:

- We assumed that orderNumber in orderedList relationship will be correctly entered manually by user
- We assumed that we can put all of the different types of Locations in the diagram then put a total,disjoint constraint on the isA relationship. When transforming to relational schema, we get rid of all location types but Hallway because they each have zero attributes. Also, Location has locationType to differentiate between the types.
- We used a dashed line to represent Unique key attributes so they do not get confused with Primary key attributes in the diagram.
- We assumed that acronym would be the primary key in Title because requirements say that “acronyms are used much more often in our database system than the title names.”
- We assumed that a computer science staff can be assigned to “exactly one” office and not “zero or one” office.

Relational Schema:

csEmployee(accountName, firstName, lastName, locationID)
- Foreign Key csEmployee (locationID) References Office (locationID) *This FK will be implemented in phase 2 because that is when we will get more data. Right now, Professor Taneja said we are given data where employees are assigned to offices that do not exist yet

csEmployeePhoneExt(accountName, phoneExtension)
- Foreign Key csEmployeePhoneExt (accountName) References csEmployee (accountName)

csEmployeeTitle(accountName, acronym)
- Foreign Key csEmployeeTitle (accountName) References csEmployee (accountName)
- Foreign Key csEmployeeTitle (acronym) References Title (acronym)

Title(acronym, name)
- Unique (name)

Location(locationID, locationType, locationName, xcoord, ycoord , floor)
- Unique (xcoord, ycoord, floor)

Office(locationID)
- Foreign Key Office (locationID) References Location (locationID)

Hallway(locationID , description)
- Foreign Key Hallway (locationID) References Location (locationID)

Edge(startLocation, endLocation)
- Foreign Key Edge (startLocation) References Location (locationID)
- Foreign Key Edge (endLocation) References Location (locationID)

Path(pathID)

orderedList(pathID, locationID, orderNumber)
- Foreign Key orderedList (pathID) References Path (pathID)
- Foreign Key orderedList (locationID) References Location (locationID)