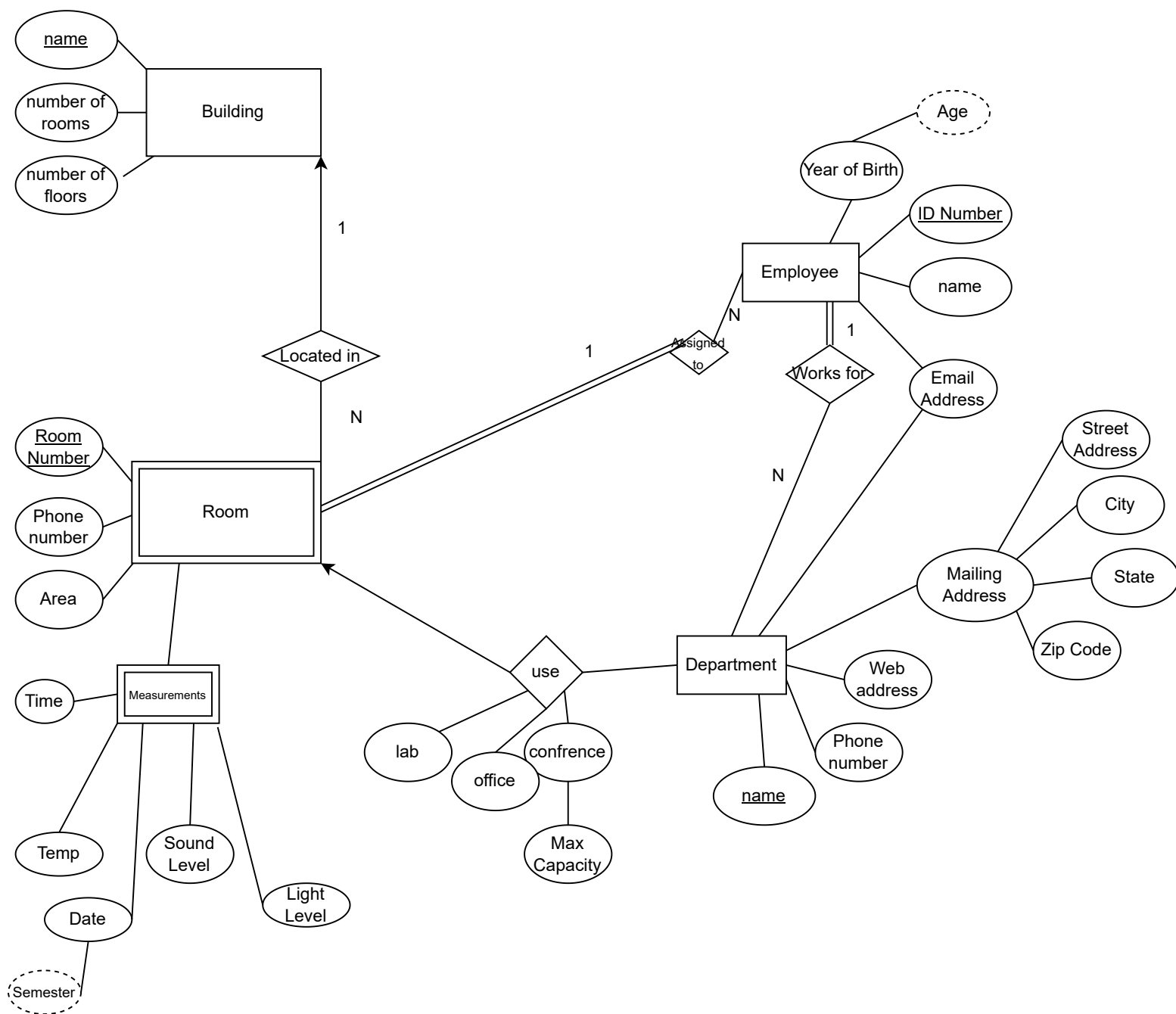


Assumptions

All departments are rooms in buildings

If a room's use is as a department, then it can only have a second use as either nothing or an office



RELATIONAL MODEL ASSUMPTIONS

If a header is underlined and not specified as the primary key, it doesn't mean anything
I just couldn't get them to stop being underlined. Foreign keys will be made clear

Each employee will have a table of room IDs they are associated with + the building (aka, which rooms they are assigned to).

Use 1 of rooms contains the following options: Lab, Office, Conference, Department

Use 2 of rooms contains the same as 1, but with the addition of NONE and the removal of "department"

The Columns marked with a "Ref:" are foreign keys referencing other tables

The combination of all columns marked "Unique" in a table form a unique key

Because it formatted weird, here are some of the relations that might have gotten lost or confused

1 mailing address: 1 department

1 room to 1 optional department (it might be a department!)

Many measurements : 1 room

Many optional employees : 1 room

Many Employees : 1 Department

Many Rooms : 1 Building

Building			
PK	<u>Name (string)</u>	Number of floors	Number of rooms (int)

<u>Associated Room IDs</u> (int)

Employee							
PK	<u>ID Number</u> (int)	<u>name (string)</u>	<u>Age (int)</u>	<u>Year of Birth:</u> <u>DDMMYYYY</u>	<u>Email Address (string)</u>	<u>Department (string)</u>	<u>Assoc. Room Ids</u>
		Unique		Unique	Unique	Ref: Department	Ref: Associated Room IDs

Room							
PK	<u>Room Number</u> (int)	<u>Phone Number (int)</u>	<u>Area:Square Feet (float)</u>	<u>Use 1(string)</u>	<u>Use 2 (string)</u>	<u>Measurements</u>	<u>Max Capacity</u> (int)

		Unique		Unique	Unique	Ref: Measurement		

Measurements							
PK	<u>Room Number</u> (int)	<u>Time:HHMMSS</u> (int, 24hr clock format)	<u>Date:DDMMYYYY</u> (int)	<u>Temperature (float)</u>	<u>Semester (String)</u>	<u>Sound Level:db (int)</u>	<u>Light Level:Lux (int)</u>
	Ref: Room	Unique	Unique				

department							
PK	<u>Name</u> (String)	<u>Room Number</u> (int)	<u>Phone Number (int)</u>	<u>Web Address (string)</u>	<u>Mailing Address</u>	<u>Email Address (String)</u>	<u>Employees</u>
		Ref: Room		Unique	Unique Ref: Mailing Address	Unique	Ref: Employee

Mailing Address					
PK		<u>Street Address (String)</u>	<u>City (String)</u>	<u>State (String)</u>	<u>Zip Code (Int)</u>