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HealthcareProvider (id, first\_name, last\_name, title, location)

Title (acronym, name)

Department (name, location, type)

-- type is ‘service’ or ‘medical practice’

-- we chose location over floor in case some are spread over several floors

Location (id, name, type, x\_coord, y\_coord, floor)

Floor (id, name, building)

Neighbor (point\_a, point\_b)

Path (id, start, end)

PathNode (path\_id, location, index)

Foreign Key HealthcareProvider (location) References Location (id)

Foreign Key HealthCareProvider (title) References Title (acronym)

Foreign Key Department(location) References Location (id)

Foreign Key Location (floor) References Floor (id)

Constraint Unique (Location.x\_coord, Location.y\_coord, Location.floor)

Foreign Key Neighbor (point\_a) References Location (id)

Foreign Key Neighbor (point\_b) References Location (id)

Constraint Unique (Neighbor.point\_a, Neighbor.point\_b)

Foreign Key Path (start) References LocationNeighbor (id)

Foreign Key Path (end) References LocationNeighbor (id)

Constraint Unique (Path.start, Path.end)

Foreign Key PathNode (path\_id) References Path (id)

Constraint Unique (PathNode.path\_id, PathNode.index)

Department has a type column which says whether the location is a ‘service’ or a ‘medical practice’. It is more convenient as opposed to having two tables. And we chose to reference the location table because through the location we can access the floor but through the floor table we cannot get the location.

Path Example:

Cafeteria to Elevator

Location\_id: 66, 45, 48, 50