Issues:

* How to direct for step free access
* If database is slow there are lots of queries required for a longer route, how can this be sped up

# Database design

## Tables

Room(rName, level, prevRoom, coords, description)

Cords refers the location of the item on the floor plan

Description is a general description of the room’s funcion

Staff(tutorID, lastName, firstName, room)

Room is the office for the member of staff

Route(from, to, route)

Route is the text description of the route

## Route finding algorithm

routeFind(route\_from, route\_to)

Database db = openDatabase()

tempData = db.sql(SELECT prevRoom FROM Room

WHERE rName = routeTo)

if(tempData.prevRoom = "") then

return db.sql(SELECT route FROM Route

WHERE from = route\_from AND to = route\_to)

else

return routeFind(route\_from, tempData.prevRoom) +

db.sql(SELECT route FROM Route

WHERE from = route\_from AND to = tempData.prevRoom

End

Algorithm works by recursively finding the previous room and then gradually building up the directions.

This will mean that the Room table will have to contain non-room items such as lifts and stairs to allow for foreign key interaction.

This method will also mean the Route table is not of size n! where n is the number of rooms, as would be the case if all routes were stored to all other routes.