**Additional Normalization Problem**

This single relation contains all the attributes of our database.

HospitalManagement( employeeID, employeeName, salary, specialty, license, patientID, patientName, age, weight, inHomeCare, primaryPhysician, location, ttime, ddate, attended, satisfactionLevel, deptID, deptName, VIN, vehicleType, ailmentName, ailDescription, medID, medCost, quantity, dosage, treatmentCost)

These are the functional dependencies that are present in the above relation.

employeeID → employeeName, salary

patientID → patientName, age, weight, inHomeCare, primaryPhysician

location, ttime, ddate → attended, satisfactionLevel

deptID → deptName

VIN → vehicleType

ailmentName → ailDescription

medID → medName, medCost, quantity, dosage

employeeIDDoctor → employeeName, salary, specialty

employeeIDNurse → employeeName, salary, license

appointmentID → employeeID, patientID, deptID, VIN, ailmentName, medID

To do a 3NF decomposition, we simply take each FD and make it into its own relation. We would need one more relation if the primary key was not contained anywhere. In this case, the primary key is just eventId, so no additional relations are required.

R1 (employeeID, employeeName, salary)

R2 (patientID, patientName, age, weight inHomeCare, primaryPhysician)

R3 (location, ttime, ddate, attended, satisfactionLevel)

R4 (deptID, deptName)

R5 (VIN, vehicleType)

R6 (ailmentName, ailDescription)

R7 (medID, medName, medCost, quantity, dosage)

R8 (employeeIDDoctor, employeeName, salary, specialty)

R9 (employeeIDNurse, employeeName, salary, license)

R10 (appointmentID, employeeID, patientID, deptID, VIN, ailmentName, medID)