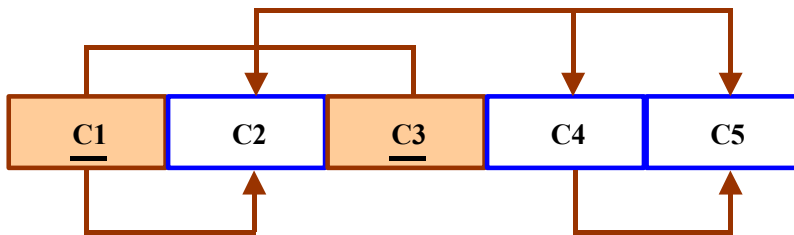Normalization

Question 1

Given the dependency diagram shown in Figure below, Answer Items 6a–6c

Dependency Diagram for Question below
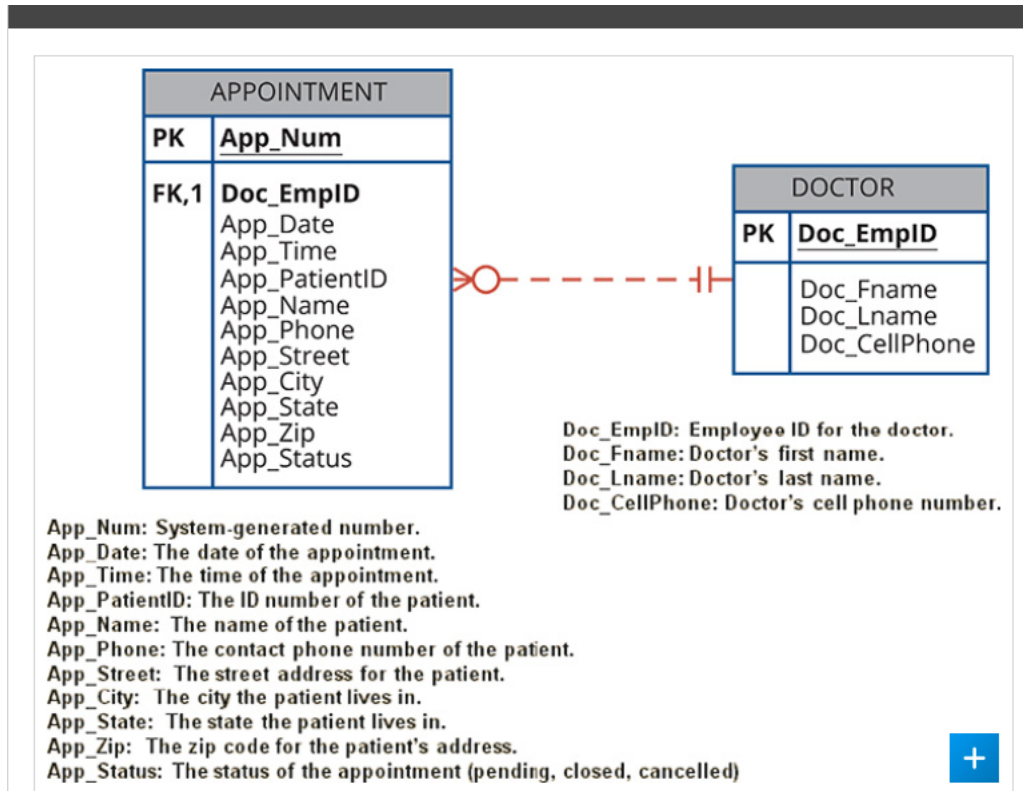

Identify and discuss each of the indicated dependencies

      a. **Identify and discuss each of the indicated dependencies.**

  b. **Create a database whose tables are at least in 2NF, showing the dependency diagrams for each table**

  c. **Create a database whose tables are at least in 3NF, showing the dependency diagrams for each table.**

Question 2

Using the descriptions of the attributes given in the figure, convert the ERD shown in Figure below into a dependency diagram that is in 3NF.

APPOINTMENT

PK	**App_Num**
FK,1	**Doc_EmpID**
	App_Date
	App_Time
	App_PatientID
	App_Name
	App_Phone
	App_Street
	App_City
	App_State
	App_Zip
	App_Status

DOCTOR

PK	**Doc_EmpID**
	Doc_Fname
	Doc_Lname
	Doc_CellPhone

Doc_EmpID: Employee ID for the doctor.
Doc_Fname: Doctor's first name.
Doc_Lname: Doctor's last name.
Doc_CellPhone: Doctor's cell phone number.

App_Num: System-generated number.
App_Date: The date of the appointment.
App_Time: The time of the appointment.
App_PatientID: The ID number of the patient.
App_Name: The name of the patient.
App_Phone: The contact phone number of the patient.
App_Street: The street address for the patient.
App_City: The city the patient lives in.
App_State: The state the patient lives in.
App_Zip: The zip code for the patient's address.
App_Status: The status of the appointment (pending, closed, cancelled)

Detail:

Appointment ERD for problem. Here, one and only one doctor gives 0 to many appointments. The primary key for appointment is App underscore number and the foreign key1 is doctor underscore emp ID. An explanation for each of the attributes for appointment are as follows. App underscore n u m is a system generated number. App underscore date is the date of appointment. App underscore time is the time of the appointment. App underscore Patient ID is the ID number of the patient. App underscore Street is the street address for the patient. App underscore city is the city the patient lives in. App underscore state is the state the patient lives in. App underscore Zip is the zip code for the patient's address. App Status is the status of the appointment, pending, closed or cancelled. The attributes for doctor are as follows. Doc underscore emp ID is the employee I D for the doctor. Doc underscore F name is the doctor's first name. Doc underscore L name is the Doctor's last name. Doc underscore cell phone is doctor's cell phone number.