Assignment 1

IT 340

150 Points

Due Date: October 7, 11 pm

1. An ERD is essentially used as a blueprint in the database design process, a floorplan that can be viewed to help with the design of the database and corresponding tables.

Having an ERD is very important because it keeps the design of the database uniform and allows for business rules to be incorporated into the design of the database before it is even started.

An ERD shows the relationships between entities, whereas the DFD shows the flow of data throughout the database.

1. An example of an insert anomaly would be if you had a patient that wasn’t getting a specific surgery, so you wanted to leave the surgeryNo blank but because you aren’t putting in a surgeryNo it wouldn’t let you add the data.

An example of an update anomaly would be if there were multiple records of the same appointment and the patient wanted to change which surgery they were getting, but when the database was updated one of the instances of the appointment wasn’t changed.

An example of a delete anomaly would be if the staffNo and dentistName were dependent on each other so when that dentist got assigned a new staffNo it would delete both the staffNo and the dentistName from the appointment.

1. Business Rules:

EMPOYEE is related to EMP\_EDUC

EMP\_EDUC is related to EDUCATION

An EMPLOYEE may or may not have an EMP\_EDUC

An EMP\_EDUC must have an EMPLOYEE

An EMPLOYEE may have many EMP\_EDUC

An EDUCATION may or may not have an EMP\_EDUC

An EMP\_EDUC must have an EDUCATION

An EDUCATION may have many EMP\_EDUC