Programming Assignment Unit 1 – Solution

Doctor Relation

DoctorID	Number	This uniquely identifies Doctor relation. Null constraint, Entity integrity constraint, Unique constraint: This is the primary key of Doctor relation.
Name	Text	Null constraint: Every doctor has a name. Note that Name refers to name and surname of the doctor. This is a design choice. Alternatively, there can be two attributes as Name and Surname.
Phone	Number	Null constraint: Every doctor has a phone number. Semantic integrity constraint: The phone number has a specific format that should be validated (This is not required in your peers assignment)
SpecialtyNumber	Number	Null constraint: Every doctor has a specialty. This is an identifier for the specialty.
Specialty	Text	Null constraint: This describes the specialty of a doctor.

Primary key : DoctorID

Candidate keys : Name, Phone

                       Name, Phone, SpecialtyNumber

Degree of relation : 5

Patient Relation

PatientID	Number	This uniquely identifies Patient relation. Null constraint, Entity integrity constraint, Unique constraint: This is the primary key of Patient relation.
Name	Text	Null constraint: Every patient has a name. Note that Name refers to name and surname of the patient. This is a design choice. Alternatively, there can be two attributes as Name and Surname.
Phone	Number	Null constraint: Every patient has a phone number. Semantic integrity constraint: The phone number has a specific format that should be validated (This is not required in your peers' assignment).
Email	Text	It is possible that patient doesn't have an e-mail address. Semantic integrity constraint: E-mail has a specific format that should be validated (This is not required in your peers' assignment).
Address	Text	Null constraint: Every patient has an address.
AddedDate	Date	Null constraint: This is the registration date of patient to hospital. Every patient should have a registration date. Semantic integrity constraint: Date has a specific format that should be validated (This is not required in your peers' assignment).
Allergies	Text	Patient may not have any allergies.
DoctorID	Number	Null constraint: Each patient is admitted by one doctor Referential integrity constraint: DoctorID is a foreign key to the Doctor relation.

Primary key   :   PatientID

Candidate keys   :   Name, Phone

                     Name, Address

Degree of relation :   8

Appointment Relation

AppointmentID	Number	This uniquely identifies Appointment relation. Null constraint, Entity integrity constraint, Unique constraint: This is the primary key of Appointment relation.
DoctorID	Number	Null constraint: There should be a doctor for each appointment. Referential integrity constraint: DoctorID is a foreign key to the Doctor relation.
PatientID	Number	Null constraint: There should be a patient for each appointment. Referential integrity constraint: PatientID is a foreign key to the Patient relation.
AppointmentDate	Date	Null constraint: This is the registration date of patient to hospital. Every patient should have a registration date. Semantic integrity constraint: Date has a specific format that should be validated (This is not required in your peers' assignment).
BloodPressure	Number	Null constraint: During each appointment, blood pressure of the patient is stored.
Weight	Number	Null constraint: During each appointment, weight of the patient is stored.
TreatmentNotes	Text	Null constraint: During each appointment, doctor writes about treatment of patient.
Medicines	Text	During appointment doctor may or may not prescribe medicine/s

Primary key   :   AppointmentID

Candidate key   :   DoctorID, PatientID, AppointmentDate

Degree of relation :   8