Ramses Loaces

Database Systems

Project – Part 1

1. Develop a conceptual data model reflecting the following requirements: (11/05/24)

a. Identify the main entity types.

b. Identify the main relationship types between the entity types identified in "a".

c. Determine the multiplicity constraints for each relationship identified in "b".

a,b,c

Entity 1	**M 1**	**Relationship**	**M 2**	**Entity 2**	**Type**
Clinic	1..1	Has	1..*	Staff	1...*
Staff	1..1	Manages	0..1	Clinic	1...1
Pet	1...*	Is registered	1..1	Clinic	1...1
Pet Owner	1..1	Owns	1..*	Pet	1...*
Staff	1..1	Performs	1..*	Examination	1...*
Pet	1..1	Undergoes	1..*	Examination	1...*

d. Identify attributes and associate them with entity or relationship types.

e. Determine candidate and primary key attributes for each (strong) entity type.

d, e

Entity	Attributes	Candidate Keys	Primary Key
Clinic	ClinicNo ClinicName ClinicAddress ClinicTelephoneNumber	{ClinicNo}, {ClinicTelephoneNumber}	{ClinicNo}
Staff	StaffNo StaffName StaffAddress StaffTelephoneNumber StaffDOB Position Salary	{StaffNo}, {StaffTelephoneNumber}	{StaffNo}
Pet Owner	OwnerNo OwnerName OwnerAddress OwnerTelephoneNumber	{OwnerNo}, {OwnerTelephoneNumber}	{OwnerNo}
Pet	PetNo PetName	{PetNo}	{PetNo}

	PetDOB AnimalSpecies Breed Color		
Examination	ExamNo ChiefComplaint Description DateSeen ActionsTaken	{ExamNo}	{ExamNo}

f. Generate the E-R diagram for the conceptual level (no FKs as attributes).

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