ENTITY RELATION DIAGRAM

Submitted to : Dr Irum Matloob

Submitted by :

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Assignment : 02

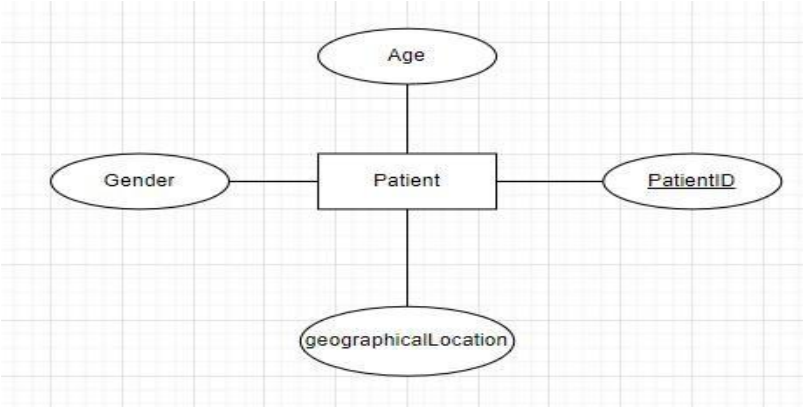
Date : 14th april,2024

ENTITIES

1. Patient:

This is a strong entity containing information about patients affected by pink eye. It includes attributes such as Patient ID, Age, Gender, and Geographic Location.

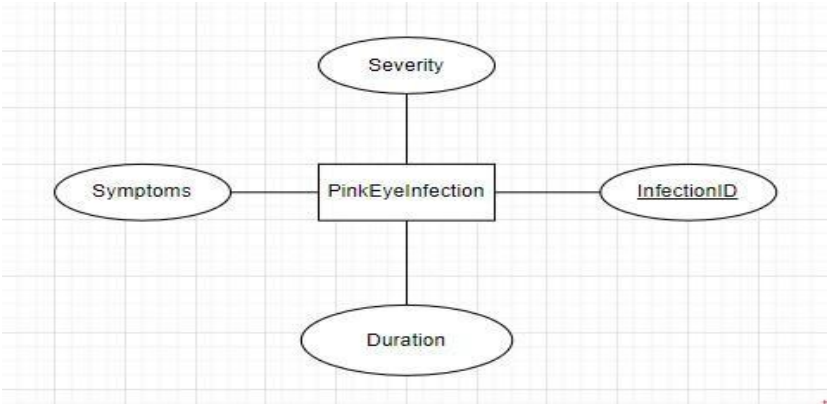
Primary Key: Patient ID



2. PinkEyeInfection:

This entity captures basic information about pink eye infections, including Infection ID, Symptoms, Duration, and Severity.

Primary Key: Infection ID

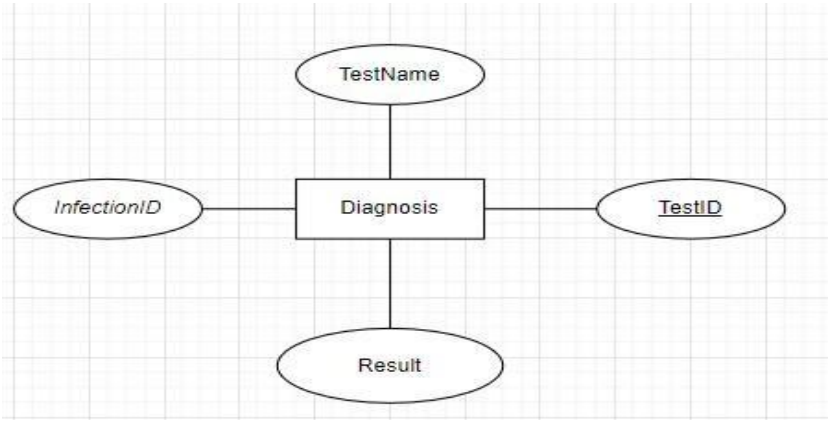


3. Diagnosis:

This entity tracks general diagnostic information related to pink eye infections, such as Test ID, Test Name, and Result.

Primary Key: Test ID

Foreign Key: Infection ID

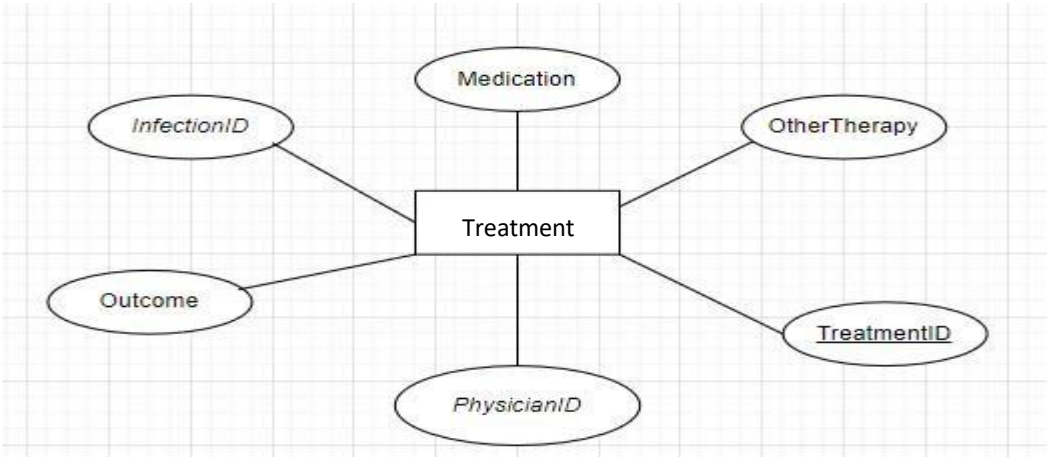


4. Treatment:

This entity contains information about treatments for pink eye infections, including Treatment ID, Medication, and Outcome.

Primary Key: Treatment ID

Foreign Key: Infection ID

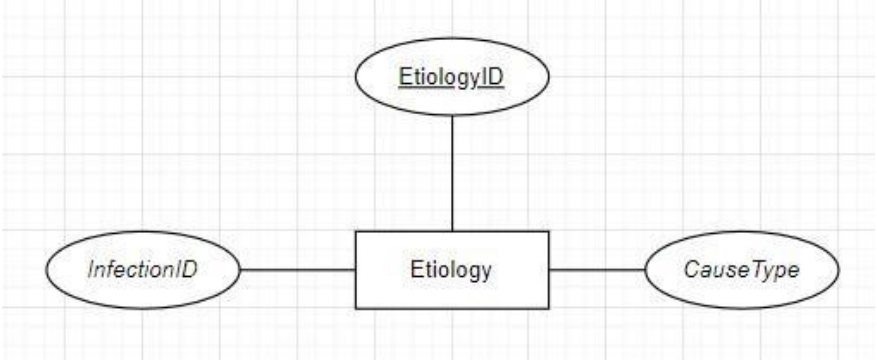


5. Etiology:

This entity captures the cause of pink eye infections, including Etiology ID and Cause Type.

Primary Key: Etiology ID

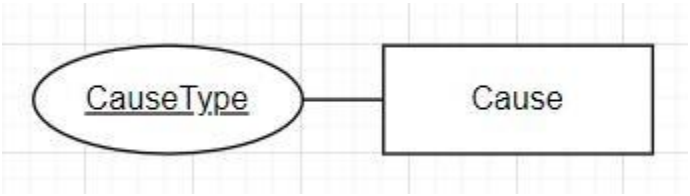
Foreign Key: Infection ID



6. Cause:

This entity represents different causes of pink eye infections, such as bacteria, viruses, allergens, or irritants.

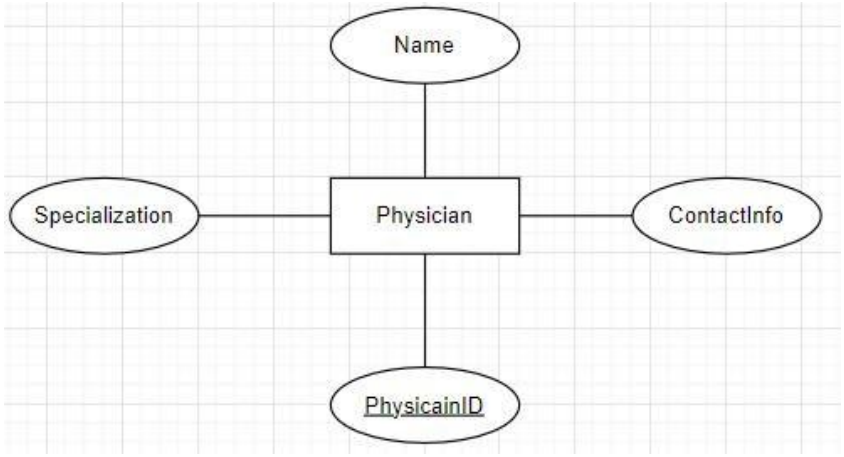
Primary Key: Cause Type



7. Physician:

This entity stores information about physicians involved in treating pink eye infections. It includes attributes such as Physician ID, Name, Specialization, and Contact Info.

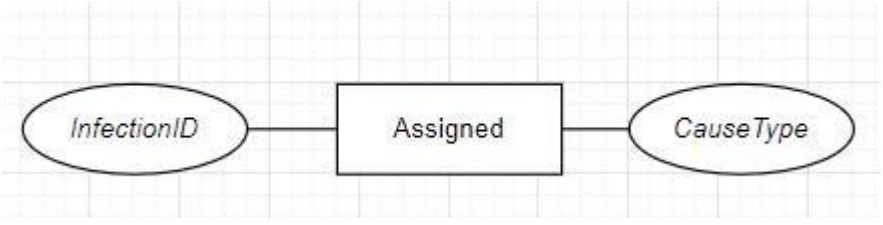
Primary Key: Physician ID



8. Assigned:

This entity tracks the assignment of physicians to pink eye infections.

Foreign key: Physician ID , Infection ID

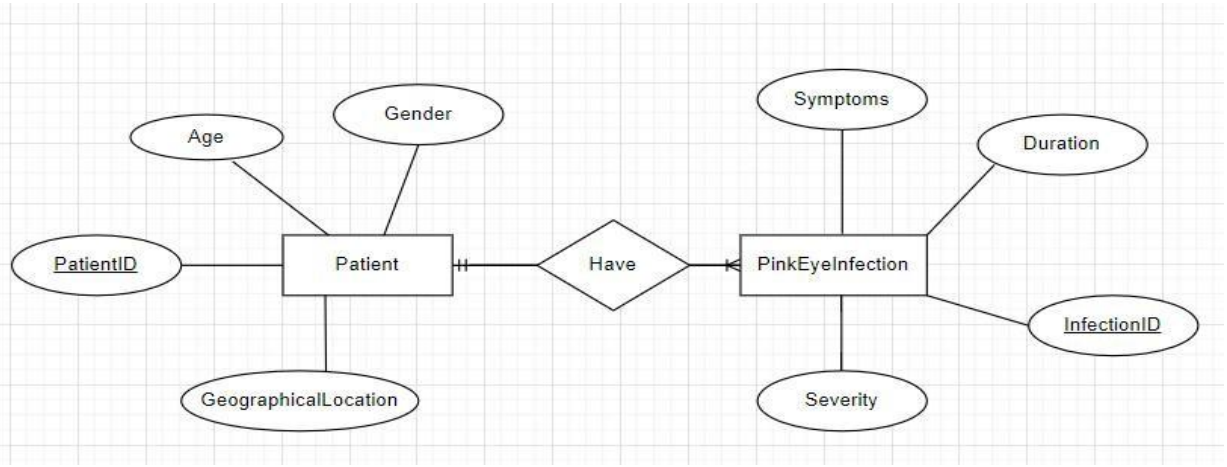


RELATIONSHIPS

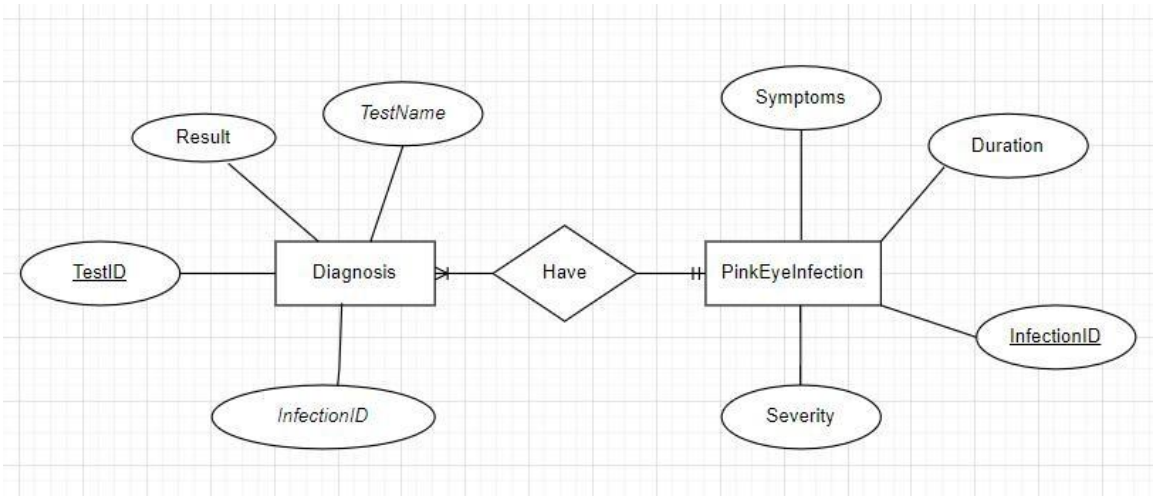
Cardinality involves one to one or many relationships while ordinality involves mandatory or optional relationships.

CARDINATLITY & ORDINALITY OF RELATIONSHIPS:

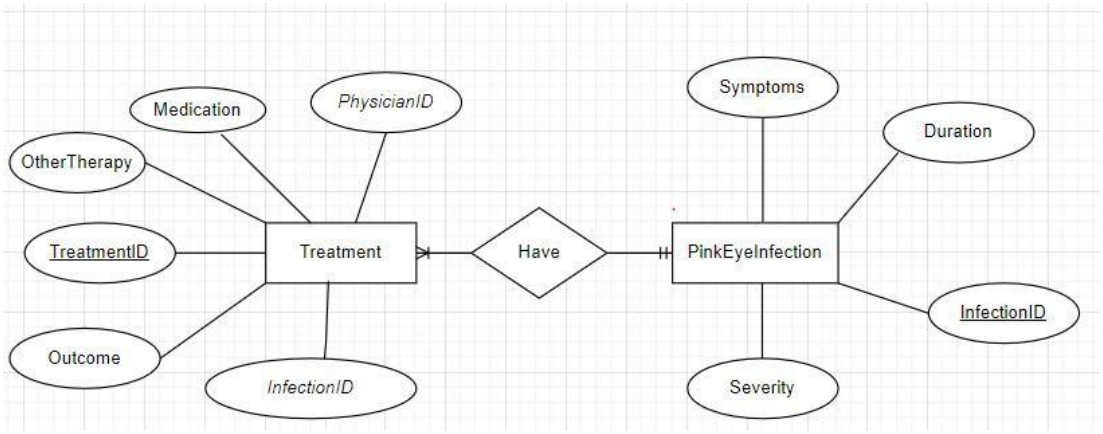
1. **Patient and PinkEyeInfection** are associated in a **one-to-many** relationship. A patient can have multiple pink eye infections, but each pink eye infection is associated with only one patient. This relationship is **mandatory** for both entities.



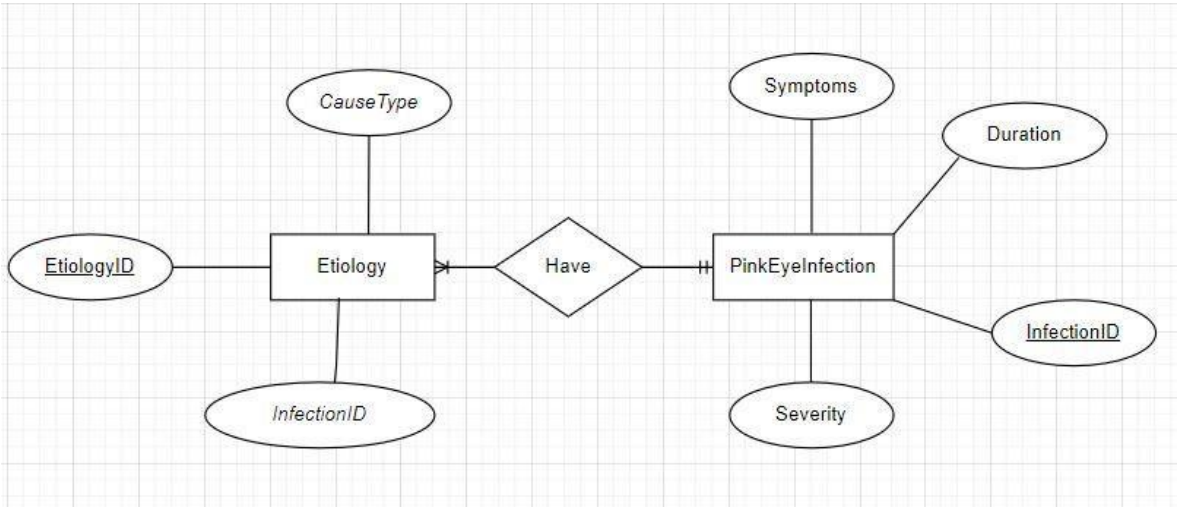
2. **PinkEyeInfection and Diagnosis** are associated in a **one-to-many mandatory** relationship. Each pink eye infection can have multiple diagnoses, but each diagnosis is associated with only one pink eye infection.



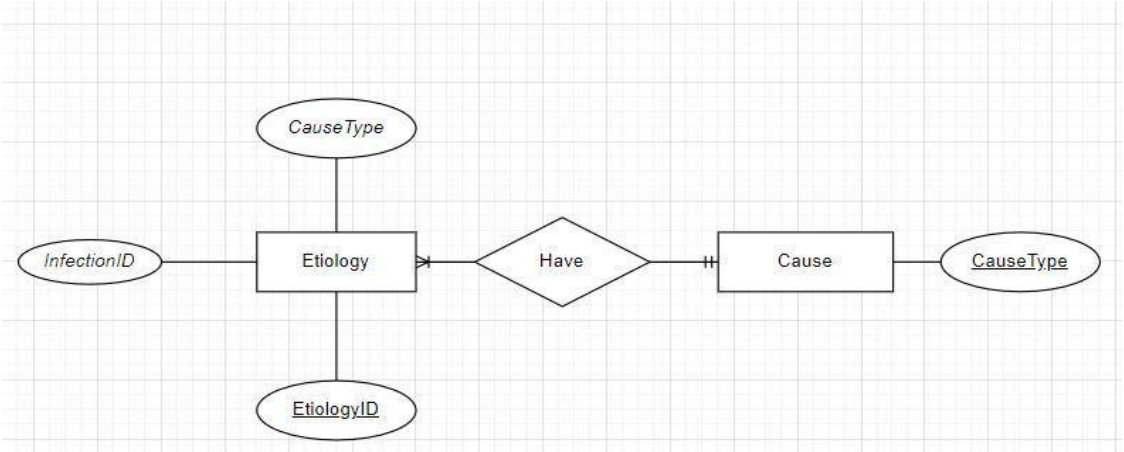
3. **PinkEyeInfection and Treatment** are associated in a **one-to-many mandatory** relationship. Each pink eye infection can have multiple treatments, but each treatment is associated with only one pink eye infection.



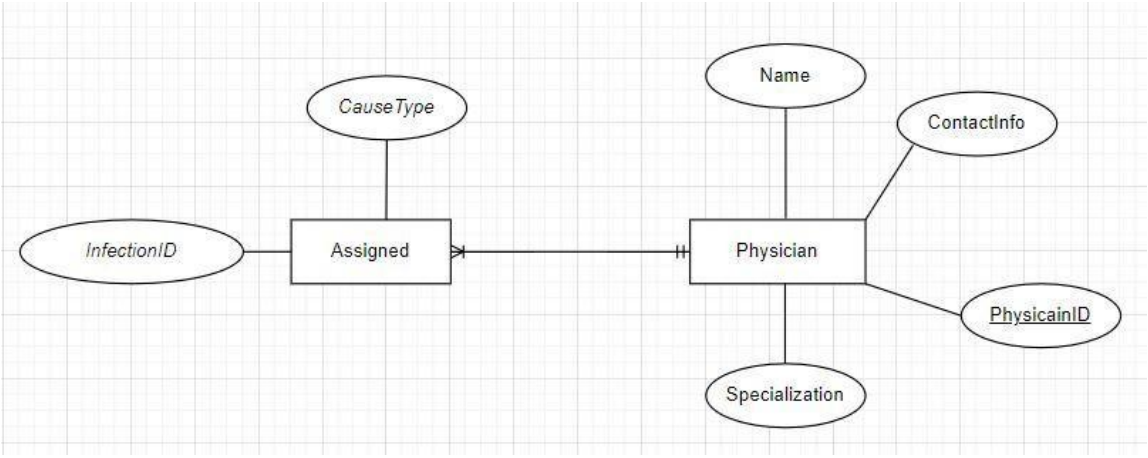
4. **PinkEyeInfection and Etiology** are associated in a **one-to-one mandatory**relationship. Each pink eye infection can have multiple etiologies, but each etiology is associated with only one pink eye infection.



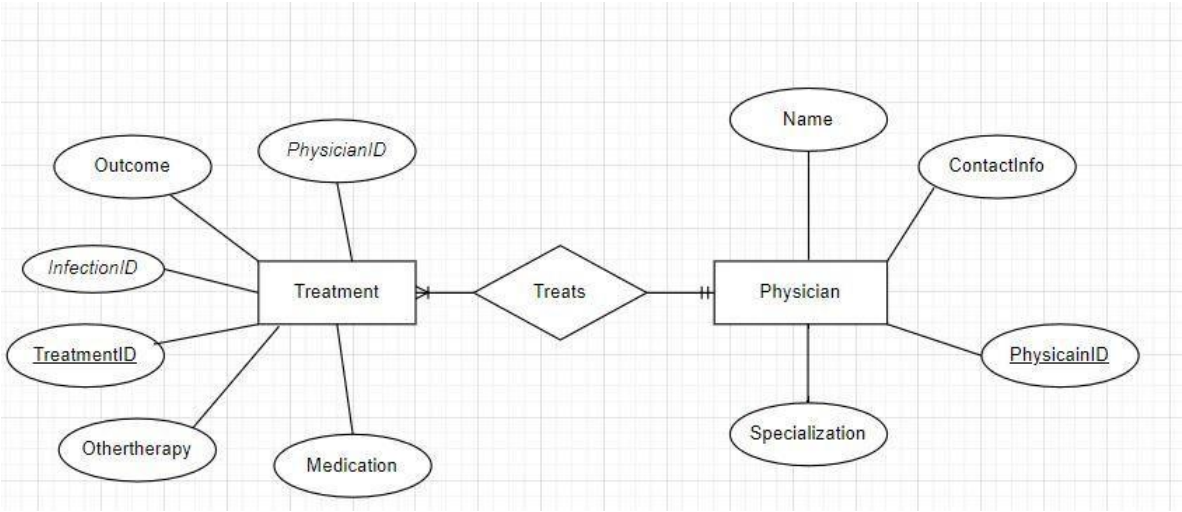
5. **Cause and Etiology** are associated in a **supertype/subtype mandatory** relationship. Each cause can have multiple etiologies, but each etiology is associated with only one cause.



6. **Physician and Assigned** are associated in a **one-to-manymandatory** relationship. Each physician can be assigned to multiple pink eye infections, but each assignment is associated with only one physician.



7. P**hysician and Treatment** are associated in a **one-to-manymandatory** relationship. A physician can perform multiple treatments for different pink eye infections, but each treatment is performed by only one physician.



DEGREE OF RELATIONSHIPS

1. The relationship between "Patient and PinkEyeInfection" and "**PinkEyeInfection and Diagnosis**" are binary relationships, as only two entities are involved in each relationship.
2. The relationships between "**PinkEyeInfection and Treatment", "PinkEyeInfection and Etiology",** and "**Cause and Etiology**" are binary relationships as well.
3. The relationship between "**Physician and Assigned**" is binary, involving only two entities.
4. The relationship between "**Physician and Treatment**" is also binary.

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