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# **Data Engineering For AI**

**Lab 2**

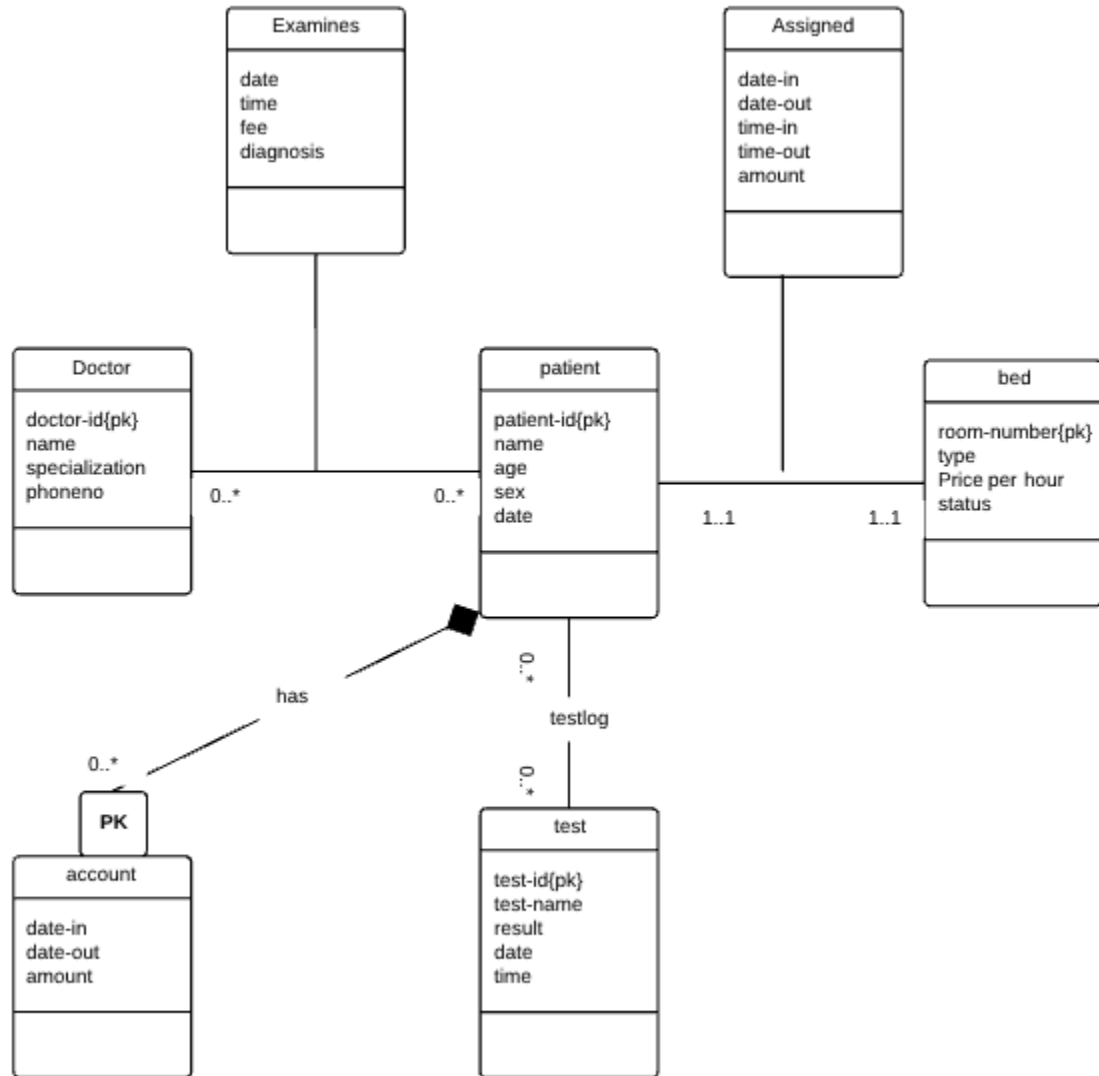
**Group 27**

**Submitted To:**

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## AI601 - Data Engineering for AI Systems

This lab is supposed to be completed individually. Please find below an ER of a hospital management system.



### Example Analytical Questions

- **Utilization**: "Which doctor has the highest patient throughput each month?"
- **Length of Stay**: "What is the average length of stay per diagnosis, per month?"
- **Cost Analysis**: "Which treatments drive the highest cost or revenue?"
- **Staff Metrics**: "How many patients were seen by a particular doctor or specialty in a given time period?"

**Design a star and snowflake schema for this data model. Use any document editor or drawing**



## Bed Dimension

Bed-ID
Room-Number
Type
Price-per-hour
Status

## Test Dimension

Test-ID (PK)
Test-Name
Result
Test-Date
Test-time

Date-ID (PK)
Full-Date
Day
Month
Quarter
Year

## Date Dimension

Hospital Fact Table
Patient-ID (FK)
Date-ID (FK)
Doctor-ID (FK)
Bed-ID (FK)
Test-ID (FK)
Exam Fee
Bed Charge
Test Charge
Total Charge

## Star-Schema

## Patient Dimension

Patient-ID (PK)
Name
Age
Sex
Admission-Date
Discharge-Date

## Doctor Dimension

Doctor-ID (PK)
Name
Specialization
Phone-Number



# Snowflake Schema

