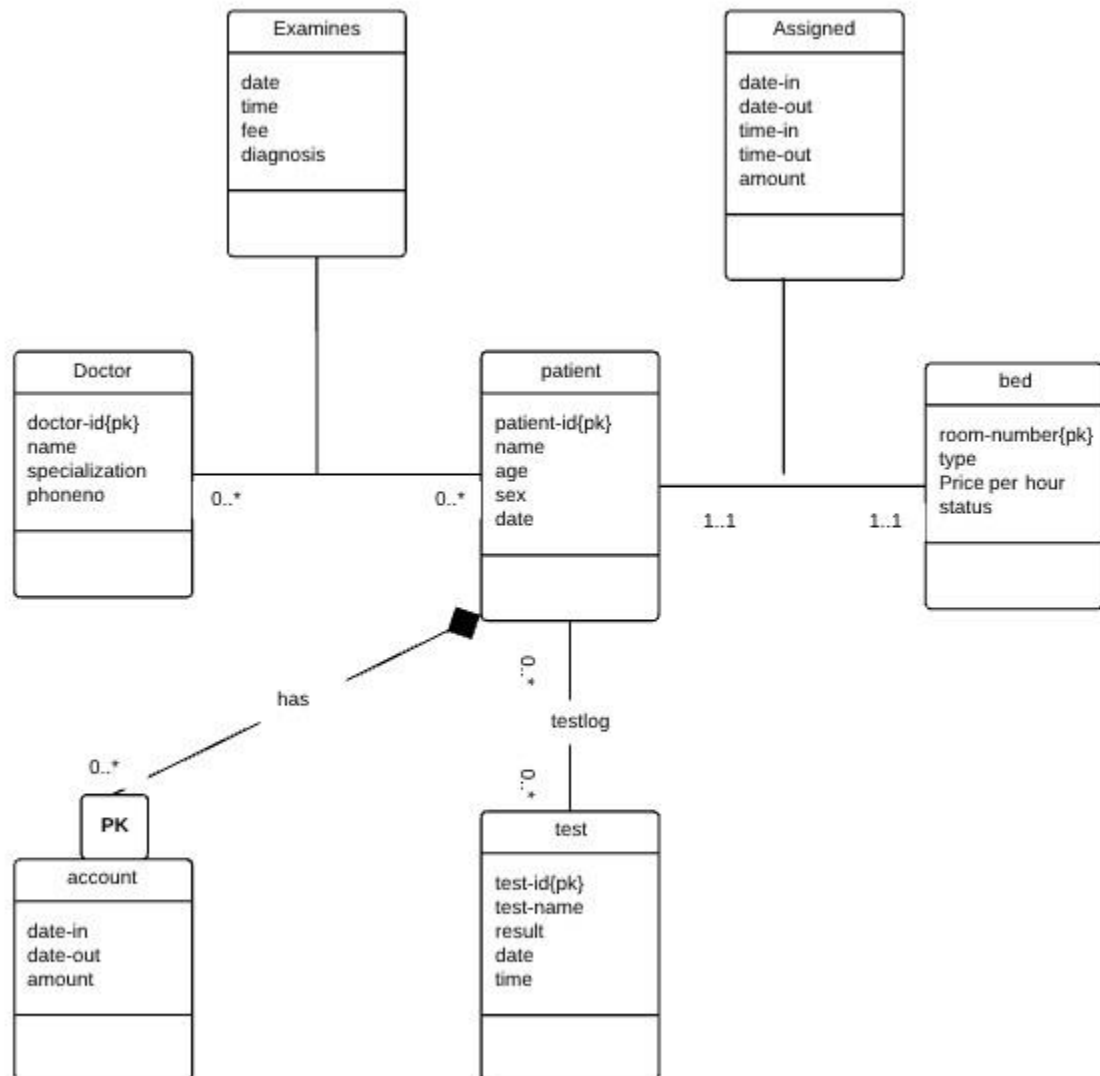24280006 – Hashim Shabbir

24280007 – Adil Mubashir Chaudhry

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
AI601 - Data Engineering for AI Systems **software e.g.**
Draw.io

Submission:

Submit the PDF file by pushing to git and opening the PR.

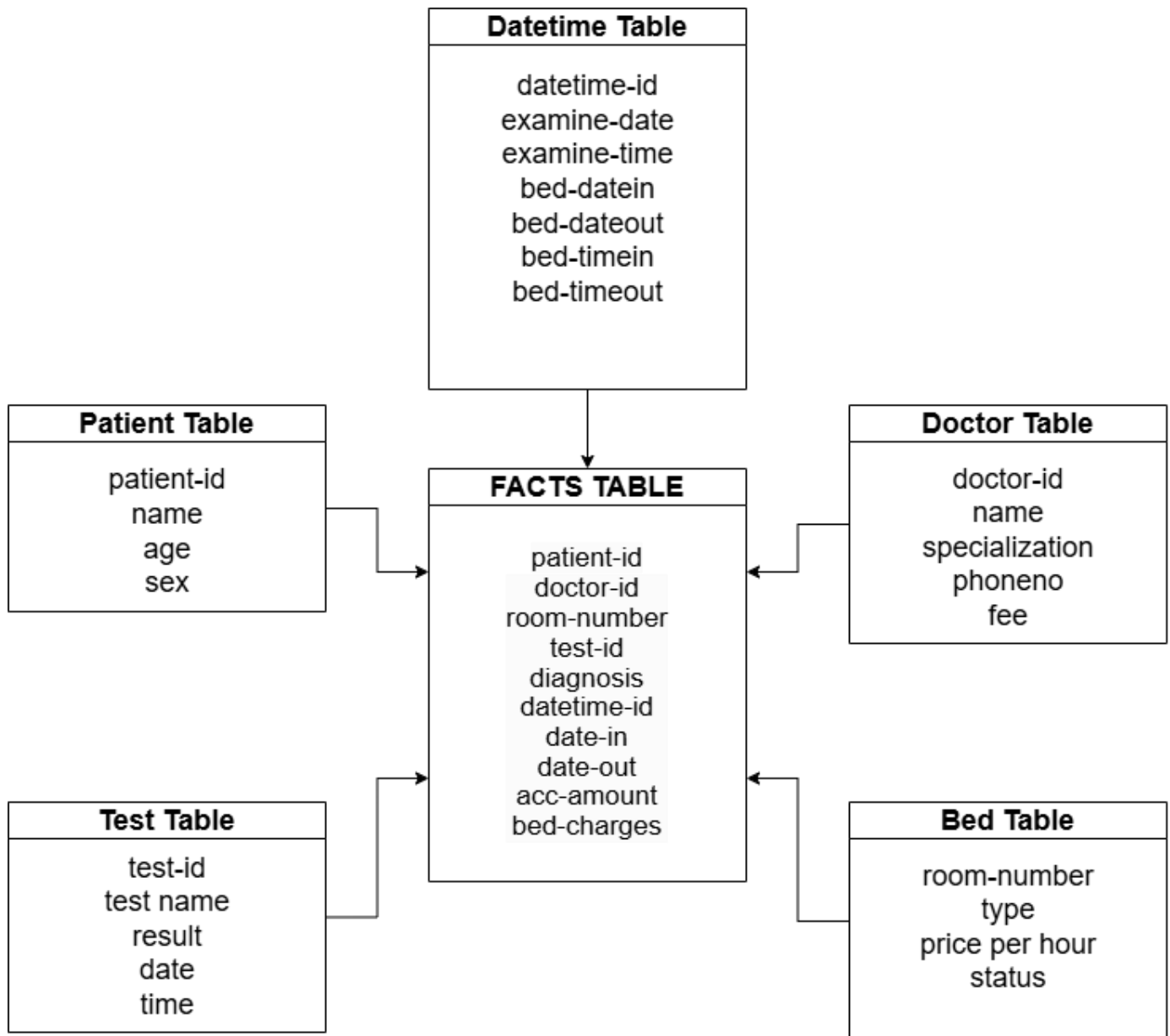**Create a new branch for Lab 2:**

    a. git checkout -b lab2

Stage and commit changes:

    b. git add hospital_schema.pdf
    c. git commit -m "Completed Lab 1 - <student_id>"
    d. git push origin lab2

Go to GitHub → Open a Pull Request (PR) from lab2-<studentid> to the main branch. The PR name should be "Lab 2: Student ID Part 1, 2, 3, 4" where part numbers represent the completed parts.

STAR SCHEMA

Datetime Table

datetime-id
examine-date
examine-time
bed-datein
bed-dateout
bed-timein
bed-timeout

Patient Table

patient-id
name
age
sex

FACTS TABLE

patient-id
doctor-id
room-number
test-id
diagnosis
datetime-id
date-in
date-out
acc-amount
bed-charges

Doctor Table

doctor-id
name
specialization
phoneno
fee

Test Table

test-id
test name
result
date
time

Bed Table

room-number
type
price per hour
status

SNOWFLAKE SCHEMA

Date Table

date-id
examine-date
bed-datein
bed-dateout

Time Table

time-id
examine-time
bed-timein
bed-timeout

Datetime Table

datetime-id
date-id
time-id

Gender Table

gender-id
sex

Patient Table

patient-id
name
age
gender-id

FACTS TABLE

patient-id
doctor-id
room-number
test-id
diagnosis
datetime-id
date-in
date-out
acc-amount
bed-charges

Doctor Table

doctor-id
name
specialization-id
phoneno
fee

Specialization Table

specialization

Test Table

test-id
type-id
test name
result
date
time

Bed Table

room-number
bed-detail-id
status

Test Type Table

type-id
test-type

Bed Detail Table

bed-detail-id
type
ward
price per hour