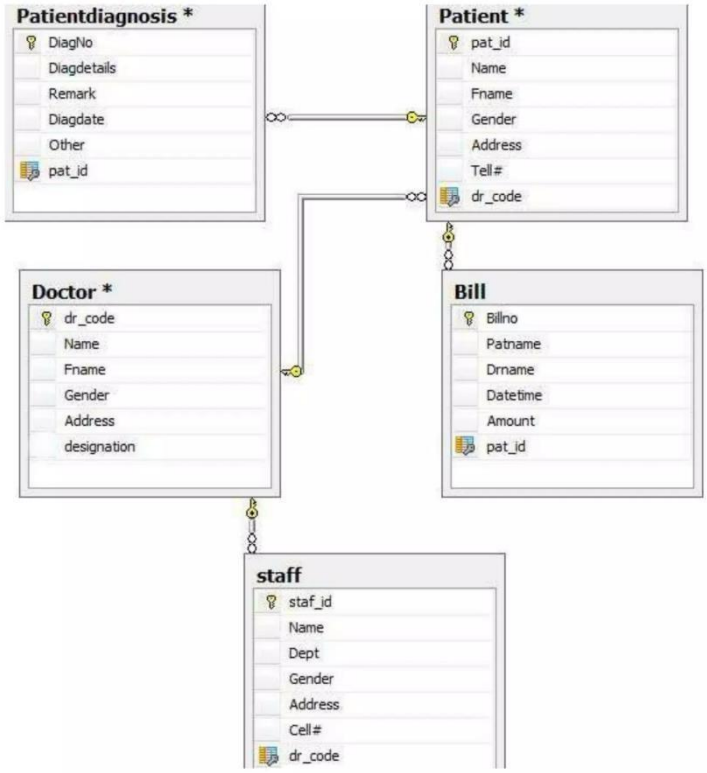
DATABASE SYSTEMS AND CLOUD COMPUTING

2nd Homework Assignment

Due on: November 27, 2024

The following schema will be used in the homework:



The Above database is for a Hospital Management. The tables provide the doctor, staffs details and patient details including doctor's appointments and the billing system.

In the schema, the primary key of each relation is underlined, and the domain of each field is listed before the field name.

The Database consists of 5 tables; patient, doctor, staff, diagnosis and bill. The '**patient**' table consists of the basic data about the patient. '**doctor**' consists of the information about doctor. The table '**staff**' consists of the information regarding the employees. '**diagnosis**' consists of data about the patient's health analysis. And finally, '**bill**' table has the fee for the patient. The billing system is integrated within a single database.

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Task-1: Write the DDL statements required to create the tables, including appropriate primary and foreign key integrity constraints. Implement the task in python:

```
from mysql import connector

my_connection = connector.connect(
host="localhost",     user="root",
password="Secret_123",
database="banking"
)
my_cursor = my_connection.cursor()
 """ create
tables
"""
my_cursor.execute("""
     insert a ddl statement
) engine=innodb
""")
```

Task 2: Write the DML statements to insert sample data to every table. Implement the task in python.

Task 3: Write the SQL statement to find the Doctor names and all of their patients

Task 4: Write the SQL statement that will return the patient's name, doctor name the total debt for each patient where they patient fee is over 100. The total order value for a Patient debt is the sum of all the bills related to the patient. Implement the task in Python.

Task 5: Write the SQL statement to find the total number of patients treated by each doctor, including doctors who have not treated any patients. Implement the task in Python.

IMPORTANT

- Academic dishonesty, including but not limited to cheating, plagiarism, and collaboration, is unacceptable and subject to disciplinary action. Any student found guilty will have a grade of F. Assignments are due in class on the due date. Late assignments will generally not be accepted. Any exception must be approved. Approved late assignments are subject to a grade penalty.