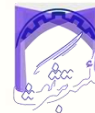# مکتب شریف

اولین بوتکمپ آموزشی- استخدامی ایران

مکتب ۵۱

سری هفتم

1-Design an ER diagram for the hospital with this scenario:
   Determine id for each entity and also clarify relationships between entities.

Scenario :

1-The hospital keeps some information about the patient such as : name, age, gender, birthdate and address.

2-The hospital assigns a unique identification number to each patient and also keeps a record for the patient including reception id, reception date and discharge date.

3-The hospital considers a doctor for each patient. Doctor's information includes: name, id, specialty, work experience (in ages for example 20 ages) and seniority. Each doctor can observe more than one patient.

4-Every patient belongs to one unit of the hospital. Each unit can be known with unit number, unit name and unit type (such as ICU, CCU, etc). Each unit has several hospital beds and each bed has it's own number and type (like electrical or simple bed).

5-If a patient needs a surgical operation, the hospital will plan for this. The hospital will provide patients a form for surgical operation including operation number, date, time, patient's and doctor's ID. Several doctors can take part in one surgical operation.

2-
A.   Define a postgres dbms called Photography.
B.   Define the entities mentioned below in this db. Then design it's ERD.(Use the concepts of id, primary key and foreign key for your table **if needed)**

   Entities:
   - **Photographer : first name, last name, nationality, photography style (e.g portrait, landscape, …), year of birth, educational field**

   - **Camera : brand, model, production year, number of shots**

   - **Organization : name , location, year of establishment, field (art, news, photography, tourism, etc). Each department can be of the photography or news agencies or a site.**

- **Award : name, institute, price(in $)**
- **Photo : title, location, capture date, file, subject**

Relations:
  - -Each photographer has 1 camera.
  - -Each photographer works in one or more organizations.
  - -Each photo is captured by one camera by one photographer for one organization.
  - -Each award is received by one photographer on a specified date for a specific photo.

C. **Create tables for this question.**

D. **Insert the following values in your tables :**
An Iranian photographer named Maryam Zandi received the first award of the global photography tournament for the photo named "Ali sagbaz" that was taken in Turkmenistan from the art and culture ministry. She was working for Iran television network. She had one camera from the Rico brand with just one lense.

E. **Update table values with the followings:**
Maryam Zandi was born in Gorgan on 20th Day in 1325. She has a Bsc degree of law and political science from Tehran university. She was an honored member of "Miras Farhangi" photographer and she had taken many portrait photographs like "Iraj Afshar" portrait in 2015.

F. **Make the following queries and capture results.**
- **First name and last name of the photographer which received the award and they are Iranian.**
- **Photos that were rewarded with more than 1000$ value.**
- **Organization with the most number of American photographers .**
- **Name of the all photographers which own Canon camera**
- **All photos taken between 2000 to 2010 with the subject of nature.**

G. **Make the following query and implement it with python. For doing this you need to install psycopg2.**
Query : list all photos taken by Iranian photographers.

By using exception handling, receive the proper error and display a proper message.

-connect to a db that does not exist.
-insert wrong username and password.
-enter a wrong port number
-insert the command with wrong syntax.
-select from a table that does not exist.

نکات

- ۱-مهلت ارسال تمرین تا **پایان روز پنجشنبه** مورخ <u>۱۴۰۰.۰۳.۰۱ ساعت ۲۴:۰۰</u> میباشد. **پاسخ تمرین را در کارتابل آموزشی خود ارسال کنید.**

- ۲-پاسخ تمرین را از طریق کارتابل آموزشی بفرستید. فرمت ارسال در گوگل فرم و گروه تلگرام مشخص شده است.

  به عنوان مثال :

  - Maktab_51_HW7_Mohammad_Ali_Kargar

- ۳-در صورتی که تمرین شامل چندین فایل یا فولدر است همگی را فشرده و سپس ارسال نمایید.

- ۴-در صورت نیاز یک فایل word یا pdf جهت توضیحات بیشتر کد همراه پاسخ ارسال نمایید.

- ۵-تمیزی فایل گزارش و فایل های برنامه نویسی نیز بخشی از نمره را تشکیل میدهد.

- **در صورتی که سوالی دارید در گروه تلگرامی بپرسید.**