**SQL Practice - DDL**

Overview: This exercise will be devoted to the practice of SQL. You will create a set of tables and relationships in an Oracle database (either the course database or another at your disposal)

Consider the following set of relation schemas and data dictionaries:

**Employee**(EmployeeNum, SSN, LastName, FirstName, Hiredate, Salary, College)

**College**(ETSCode, DateEstablished, IsAccredited)

**Building**(Name, College)

**Room**(Building, RoomNum, SeatingCapacity)

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| --- | --- | --- | --- | --- | --- | --- |
| **College**: Contains information about a Villanova University college | | | | | | |
| **Attribute Name** | **Description** | **Datatype** | **Domain** | **Nullable** | **PK** | **FK** |
| ETSCode | Educational Testing Service Code that identifies the college | CHAR(8) | All | No | Yes | No |
| DateEstablished | Date college was first established | DATE | All | No | No | No |
| IsAccredited | Flag indicating whether the college is accredited | CHAR(1) | “Y”,”N” | Yes | No | No |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Building**: Contains information about a Villanova University building | | | | | | |
| **Attribute Name** | **Description** | **Datatype** | **Domain** | **Nullable** | **PK** | **FK** |
| Name | Name of the building | VARCHAR(50) | All | No | Yes | No |
| College | Code of college that controls the building | CHAR(8) | All | Yes | No | Yes |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Room**: Contains information about specific rooms in Villanova University buildings | | | | | | |
| **Attribute Name** | **Description** | **Datatype** | **Domain** | **Nullable** | **PK** | **FK** |
| Building | Name of the building | VARCHAR(50) | All | No | Yes | Yes |
| RoomNum | Number of the room | CHAR(4) | 0000 – 9999  (*don’t worry about enforcing this domain in your DDL*) | No | Yes | No |
| SeatingCapacity | Number of people that the room can hold | NUMBER(4) | All | Yes | No | No |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Employee**: Contains information about a Villanova University employee | | | | | | |
| **Attribute Name** | **Description** | **Datatype** | **Domain** | **Nullable** | **PK** | **FK** |
| EmployeeNum | Unique identifier for employee | CHAR(8) | All | No | Yes | No |
| SSN | SSN for employee | CHAR(9) | Value must be unique for each employee  (*don’t worry about enforcing the fact that SSN characters are numeric*) | Yes | No | No |
| LastName | Employee last name | VARCHAR(50) | All | No | No | No |
| FirstName | Employee first name | VARCHAR(50) | All | No | No | No |
| Hiredate | Date on which employee was hired | DATE | All, and defaults to the date and time at which the record was created | Yes | No | No |
| Salary | Annual employee earnings | NUMBER(9,2) | All | No | No | No |
| College | College for which the employee works | CHAR(8) | All | Yes | No | Yes |

**Your mission, should you choose to accept it:**

Create the above tables and relationships in Oracle by developing appropriate SQL statements. Enforce all constraints indicated by the relation schemas and data dictionaries, unless explicitly directed to do otherwise (e.g., the data dictionary for *Employee* states that you don’t need to enforce the fact that SSNs contain only numeric characters).