Consider the following relational schema.

Employee (eno, NIC, ename, address, dnumber)

Department (dno, dname)

Project (pno, pname,location)

Work\_on (eno, pno, hired\_date, hours)

1. Considering the following data types for the above schema, create the following relational database using CREATE TABLE SQL statement. Ensure that appropriate referential integrity constraints (foreign keys) are met. Save the script as “**CreateDB.sql**”
2. Employee(eno:INTEGER,NIC:CHAR(10),ename:VARCHAR(50),address:VARCHAR(50),

dnumber:INTEGER)

Department (dno:INTEGER,dname:varchar(50))

Project (pno:INTEGER,pname:VARCHAR(20))

Work\_on(eno:INTEGER,pno:INTEGER,hired\_date:DATATIME, hours:INTEGER)

1. Delete all the tables you have created using DROP TABLE SQL statement.
2. The following constraints exist for the schema. Use appropriate constraint mechanisms (such as CHECK constraint, etc.) to enforce the rules stated by modifying existing database schema and re-create the tables.

* Ensure that the Employee’s number is a three digit (0-9) number
* Ensure that the Employee’s NIC number contains 9 digits (0-9) and one character which is “V” or “v”
* Ensure that all the Employees have a name.
* Ensure that the number of working hours is a positive value. (> 0)
* In the Department table, the value for dname attribute must be one of the following: “Headquarters”, “Administration”, or “Research”.

1. Insert the following data using the INSERT SQL statement

**Employee**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ename** | **NIC** | **Eno** | **address** | **dnumber** |
| Smith,John B | 901250087V | 100 | 731 Fondren, Houston | 5 |
| Wrong, Franklin T. | 895290452V | 101 | 638 Voss, Houston | 5 |
| Zelaya, Alicia J. | 923859070V | 102 | 33321 Castle, Spring | 4 |
| Wallace, Jennifer S. | 918257988V | 103 | 291 Berry, Bellaria | 4 |
| Narayan, Remesh K. | 904850045V | 104 | 975 Fire Oak, Humble | 5 |
| English, Joyce A. | 889950600V | 105 | 5631 Rice, Houston | 1 |
| Jabbar, Ahamad V | 915850123V | 106 | 980 Dallas, Houston | 1 |

**Department**

|  |  |
| --- | --- |
| **dno** | **dname** |
| 1 | Headquarters |
| 4 | Administration |
| 5 | Research |

**Project**

|  |  |  |
| --- | --- | --- |
| **pno** | **pname** | **Location** |
| 1 | Road Construction | Bellaire |
| 2 | Power plant | Sugarland |
| 3 | Reproduction | Houston |
| 4 | Recycling | Stafford |

**Work\_on**

|  |  |  |  |
| --- | --- | --- | --- |
| **eno** | **pno** | **hired\_date** | **hours** |
| 100 | 1 | 12/04/2011 | 12 |
| 100 | 2 | 25/02/2011 | 1 |
| 100 | 3 | 15/05/2011 | 20 |
| 101 | 1 | 02/06/2011 | 50 |
| 102 | 4 | 08/06/2011 | 5 |
| 103 | 3 | 12/07/2011 | 3 |
| 104 | 2 | 20/07/2011 | 40 |
| 105 | 3 | 18/05/2011 | 1 |
| 105 | 1 | 01/07/2011 | 11 |
| 106 | 4 | 27/06/2011 | 1 |

1. Delete “***Wallace, Jennifer S.”***  from the Employee table.
2. Change the name of the project **“Recycling**” to **“Water Recycling”.**