**Learning Activity 3.6: Normalization Task 2**

Consider the following functional dependencies shown in the figure. Normalize the given example until 3NF, with explanations.

RecruiterID

RecruiterName

StatusID

Status

City

State

StatePopulation

CityPopulation

NoOfRecruits

R1

Katy

IF

Internal Full Time

Portland

ME

1,350,000

70,000

11

R1

Katy

IF

Internal Full Time

Grand Rapids

MI

9,990,000

190,000

20

R2

Abra

IP

Internal Part Time

Rockford

IL

12,900,000

340,000

17

R3

Jana

CN

Contractor

Spokane

WA

6,800,000

210,000

8

R3

Jana

CN

Contractor

Portland

OR

3,900,000

600,000

30

R3

Jana

CN

Contractor

Eugene

OR

3,900,000

360,000

20

R4

Maria

IF

Internal Full Time

Rockford

IL

12,900,000

340,000

14

R4

Maria

IF

Internal Full Time

Grand Rapids

MN

5,400,000

11,000

9

R5

Dan

CN

Contractor

Grand Rapids

MI

9,900,000

190,000

33

* Split the above table into 3 separate tables.
* Remove redundant data in RecruiterEmployTypeInfo Table.

RecruiterInformation

* RecruiterID is the primary key

|  |  |  |
| --- | --- | --- |
| **RecruiterID** | **RecruiterName** | **NoOfRecruits** |
| R1 | Katy | 11 |
| R1 | Katy | 20 |
| R2 | Abra | 17 |
| R3 | Jana | 8 |
| R3 | Jana | 30 |
| R3 | Jana | 20 |
| R4 | Maria | 14 |
| R4 | Maria | 9 |
| R5 | Dan | 33 |

RecruiterEmployTypeInfo

* RecruiterID is Foreign Key to RecruiterInformation Table
* StatusID is Primary Key to EmployTypeInfo Table

|  |  |  |
| --- | --- | --- |
| **RecruiterID** | **StatusID** | **Status** |
| R1 | IF | Internal Full Time |
| R2 | IP | Internal Part Time |
| R3 | CN | Contractor |
| R4 | IF | Internal Full Time |
| R5 | CN | Contractor |

RecruiterTerritory

* RecruiterID is Foreign Key to RecruiterInformation Table
* Make City and State Composite Primary Key

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **RecruiterID** | **City** | **State** | **StatePopulation** | **CityPopulation** |
| R1 | Portland | ME | 1,350,000 | 70,000 |
| R1 | Grand Rapids | MI | 9,990,000 | 190,000 |
| R2 | Rockford | IL | 12,900,000 | 340,000 |
| R3 | Spokane | WA | 6,800,000 | 210,000 |
| R3 | Portland | OR | 3,900,000 | 600,000 |
| R3 | Eugene | OR | 3,900,000 | 360,000 |
| R4 | Rockford | IL | 12,900,000 | 340,000 |
| R4 | Grand Rapids | MN | 5,400,000 | 11,000 |
| R5 | Grand Rapids | MI | 9,900,000 | 190,000 |