# Tables and Sample Data

## Table: Employee

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **EmployeeID** | **First Name** | **Last Name** | **Birthdate** | **HomeState** | **Gender** |
| 1 | John | Doe | 1/1/1978 | FL | M |
| 2 | Jane | Eyre | 4/7/1985 | AL | F |
| 3 | Alexander | Hamilton | 6/4/1960 | NY | M |
| 4 | Chris | Smith | 12/5/1990 | CA | M |
| 5 | Emily | Dickinson | 3/5/1945 | VT | F |

The Employee table contains all Employees in the system. EmployeeID is an Identity column. You can assume that a given employee will be listed in this table only once. HomeState would be the state the employee resides in.

## Table: Company

|  |  |  |
| --- | --- | --- |
| **CompanyID** | **CompanyName** | **HQState** |
| 1 | Steve's Widgets Inc | FL |
| 2 | Spigots and More LLC | NY |
| 3 | Maria's Bakery | CA |

The Company table contains all Companies in the system. CompanyID is an identity column. HQState is the State in which the company’s headquarters is located. You can assume that a given company will be listed in this table only once.

## Table: Plan

|  |  |  |  |
| --- | --- | --- | --- |
| **PlanID** |  | **PlanType** | **PlanName** |
|  | 1 | Medical | Medical Plan 1 |
|  | 2 | Dental | Dental Plan 1 |
|  | 3 | Vision | Vision Plan 1 |
|  | 4 | Medical | Medical Plan 2 |

The Plan table contains all Plans in the system. PlanID is an identity column. PlanType refers to whether the plan is a Medical, Dental or Vision plan. You can assume that a given plan will be listed in this table only once.

## Table: PlanEnrollment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EnrollmentID** | **EmployeeID** | **PlanID** | **EnrollmentStartDate** | **EnrollmentEndDate** |
| 1 | 1 | 1 | 1/1/2015 | 3/1/2015 |
| 2 | 1 | 2 | 1/1/2014 | NULL |
| 3 | 2 | 1 | 6/1/2013 | 5/1/2015 |
| 4 | 3 | 4 | 2/1/2013 | NULL |
| 5 | 4 | 2 | 5/3/2015 | 7/1/2015 |
| 6 | 1 | 4 | 3/2/2015 | NULL |

The PlanEnrollment table is a mapping between the Employee table and the Plan table. EnrollmentID is an identity column. EmployeeID and PlanID are foreign keys to the Employee and Plan table respectively. A record in this table signifies that a given Employee has enrolled in a given Plan. When an Employee enrolls in a plan, a record is created with a given EnrollmentStartDate and a NULL EnrollmentEndDate. If EnrollmentEndDate has a date, it means the Employee will no longer be enrolled starting on that date.

## Table: Employment

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **EmploymentID** | **CompanyID** | **EmployeeID** |  | **EmploymentStartDate** | **EmploymentEndDate** |
| 1 | 1 | 1 | 1/1/2000 | | NULL |
| 2 | 1 | 2 | 4/1/2019 | | 5/1/2015 |
| 3 | 1 | 3 | 5/1/2015 | | NULL |
| 4 | 2 | 4 | 3/6/2009 | | 7/1/2015 |
| 5 | 3 | 5 | 2/1/2002 | | NULL |

The Employment table is a mapping between the Company table and the Employee table.

EmploymentID is an identity column. CompanyID and EmployeeID are foreign keys to the

Company and Employee table respectively. A record in this table signifies that a given Employee works for a given Company. When an Employee is hired by a company, a record is created with a given CompanyID and EmployeeID and the hiring date in EmploymentStartDate with EmploymentEndDate being NULL. If EmployementEndDate has a date, it means the Employee will no longer work for that Company starting on that date.

# Questions

For the following questions, please provide a query or stored procedure that does the following:

1. List all the states in the Employee table and the number of employees that reside in the state (Expected Columns: State, NumberOfEmployees)
2. List all the Companies and the number of employees that are actively working there as of the day the query is run (Expected Columns: CompanyName, NumberOfEmployees)
3. List all employees that are enrolled in a Medical plan and is at least 26 years old as of the day the query/stored procedure is run (Expected Columns: EmployeeFirstName, EmployeeLastName)
4. List all employees that are enrolled in all 3 plan types: Medical, Dental and Vision as of the day the query/stored procedure is run (Expected Columns: EmployeeFirstName, EmployeeLastName)
5. List all Companies and gives the name and start date of the Employee that has been working in the Company the longest out of all Employees that are currently working there.

(Expected Columns: CompanyName, EmployeeName, EmploymentStartDate)