Deadline – Wednesday, October 14, 2020

NOTE:

1. **THIS ASSIGNMENT IS NOT LINKED WITH ASSIGNMENT NO. 4 SO DON'T USE OLD SOLUTION/CODE. THIS ASSIGNMENT IS IMPORTANT**
2. **Refer linq-cheatsheet.pdf from [Notes] folder for LINQ syntax.**

Open Assignment No. 6 Console Application for HR department to analyze the dataset using LINQ Employee(EmpNo, Name, Designaion, Salary, Commision, DeptNo) and Department(DeptNo, DeptName, Location) data.

You need to provide following functionalities:

1. Create department and employee classes override ToString() to print object contents
2. In Main() method take department details from dept.csv as input and initialize DeptList (Dictionary)
   Hint:

```
// Open file and Read line by line
while ((deptstring  = reader.ReadLine()) != null)  {
//line fetched from csv file
//string deptstring = "50,Training,Karad";
// Split details separated by a comma followed by space
string[] deptDetails = deptstring.Split(",");
Department dept = new Department();
dept.DeptNo=int.Parse(deptDetails[0]); dept.DeptName=deptDetails[1];
dept.Location=deptDetails[2];
//add dept object in DeptList
DeptList.Add(10, dept);
}
```

3. In Main() method take employee details from emp.csv as input and initialize EmpList (Dictionary) same like task 2

USE LINQ for Sr. No. 4 - 11

4. Find location name with single department in the dataset (use LINQ).
   a. Implement your code into LocationWithSingleDept(DeptList) function.
   b. You are expected to return list of location in which only one department is given in the data.
   c. Function return type must be List<String>.
   d. If any location having multiple departments, then return empty list.
5. Find department names in which no employees
   e.g. List<string> FindDeptsWithNoEmps(EmpList, DeptList)
6. Write function to calculate total salary (Sal+Comm) of all employees
   e.g. double Calcluate_Total_Salary(EmpList)
7. Write function to display all employees of particular department
   e.g. List<Employee> GetAllEmployeesByDept(int DeptNo)
8. Write function to calculate department wise count of employees
   e.g. Dictionary<DeptNo,Double> DeptwiseStaffCount(EmpList)
9. Write function to calculate department wise average salary
   e.g. Dictionary<DeptNo,Double> DeptwiseAvgSal(EmpList)
10. Write function to calculate department wise minimum salary
    e.g. Dictionary<DeptNo,Double> DeptwiseMinSal(EmpList)
11. Display employee names along with department names
    e.g. Dictionary<EmpNo, DeptName, EmpName> GetEmpInfo(EmpList, DeptList)

git commit –m "Assignment no. 6 modified"

Important methods of (Immutable) String Class:

- Split
- Trim
- ToLower
- ToUpper
- Contains
- StartWith
- EndWith
- PadLeft
- PadRight
- Concat
- Join
- Remove
- Replace
- Reverse<>
- Insert
- InedexOf
- ToArray
- ToCharArray
- ToDictionary<>
- ToList<>

Following C# collections are important: