**Implementing Physical Design**

**Use the calry\calry server**



1. An employee can be a member of several teams.
2. The visit the teams make to customers is recorded.
3. The Type of visit made to customers is recorded.

**ERD for Retu IT Consultants**

|  |  |
| --- | --- |
| **Column Name** | **Column Information** |
|  |  |
| Employee ID | This is just a number which the database generates automatically. The first employee id will be 500 and increments in 50 after that. There are over 15,000 employees in the company. It is the primary key column. |
| EmployeeName | A character field up to 75 characters long. Some employees names require international characters sets and all names **must be recorded** |
| EmployeeAddress1 | A character field up to 50 characters long, recording the local address of the employee. ***Create a user defined data type for the address column. Bind the UDT to this column.*** |
| EmployeeAddress2 | A character field up to 50 characters long, recording the local address of the employee.  ***Create a default – default name – EmpAdd2Dflt – Default Value “Dublin”. Bind the default to this column.*** |
| EmployeeAddressLocation | This columns holds the XY of the employees address |
| EmployeeDOB | The date of birth of the Employee |
| PPSN | A character field 8 characters long. Create a unique constraint on this column as every PPSN will be unique. |
| EmployeeSalary | A money column – no salary will be greater than 200,000 euro. ***Create a rule to enforce this and bind the rule to this column.*** |
| EmployeeBonus | A money column which is calculated as 15% of the employee salary. ***Create this as a calculated column. Note the results of this calculation should be permanently recorded in the employee table***. |

**Employee Table**

***Your Student ID. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

***Your Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

1. **Schemas**
   1. *Create a schema called test1.*
   2. *Make it your default schema.*
   3. *Transfer the TeamTBL into the test1 schema*

**(15 marks)**

1. **Using the detail on page 2 create the EmployeeTBl**

*Note you will need to:*

1. *Decide the correct data type for each column.*
2. *Make the Employee ID an identity column setting the seed and increment values.*
3. *Make the Employee ID the Primary Key.*
4. *Set the appropriate null property on the Employee Name column.*
5. *Create the User Defined Type for Employee Adress1 column. Then bind it to the column.*
6. *Create the default for the Employee Adress2 column. Then bind it to the column.*
7. *Create the unique constraint for the Employee PPSN column.*
8. *Create the rule for the Employee Salary column. Then bind it to the column.*
9. *Make the Employee Bonus column a computed column.*

**(35 marks)**

1. **Create the relationship between the EmployeeTbl and the TeamTBL.**

*Note* that when creating the relationship between the team table and the employee table

1. Assume that there is conflicting existing data in the TeamTbl.
2. If an employee is deleted in the EmployeeTBL then that employee id should be set to null in the TeamTbl.
3. If an EmployeeID is changed in the EmployeeTBL then that EmployeeID should be automatically changed in the TeamTbl.

**(25 marks)**

1. **Insert Data into the tables**

Based on the following information

**John Soap**, from Rialto, Dublin born on the 15/10/1990 whose PPSN is k09897; and whose salary is 45,000.

He joined **Team** **50** (whose charge rate is 2,000) on the 20/05/2015.

**(15 marks)**

1. **Use Help to create a synonym name “VTT” for the VisitTypeTbL. (10 marks)**