COSC 641

Spring 2021

FSU

# Blockchain Finance

# Database Final Project COSC 641 Part 1a

You are employed to work on an existing project. This new financial organization (bank) is based on Bitcoin. The base tables and some data are already provided for you. The ER diagram and structure of tables are in a supplemental document.

Please number your chapters correctly. I grade one chapter at a time.

The data and based tables are under PROJECT2020 account. You can access each table by using PROJECT2020.table\_name. You can copy each table into your Oracle account like:

CREATE TABLE branch

AS

SELECT \*

FROM PROJECT2020.branch;

Check your data:

SELECT \*

FROM branch;

Check the attributes:

DESC branch;

Note 1: Frequently it is required to make changes to the base tables (add or delete fields). You can use ALTER TABLE. To add/delete fields to your tables. The added fields will have value of NULL for now.

Note 2: All of the data must be in your based tables. We will not create FORCED view.

Note 3: For complex queries you can create intermediate views and create view from view.

Note 4: We will use the views and sequences later on in the project. For now, just create them.

Please try to keep the names tables as close to the original names as you can. If there is any missing data, feel free to add it to your tables.

List of tables are:

1. BRANCH
2. DEPARTMENT
3. CAR
4. DRIVER (emp drivers car)
5. CUSTOMER
6. BANK\_EMPLOYEE
7. JOB
8. EMP\_ANNUAL\_DATA
9. BRANCH\_EMPLOYEE (emp work at branch)
10. ATM
11. BRANCH\_ACCESS\_POINTS (branch has accesspoints)
12. BRANCH\_MANAGER (emp manager branch)
13. LOAN
14. LOAN\_PROJECT
15. DEPOSIT\_ACC
16. DEPOSIT\_ACC\_PRODUCT
17. CD\_ACCOUNT
18. CD\_PRODUCT
19. CREDIT\_ACCOUNT
20. CREDIT\_PRODUCT
21. LOAN\_PAYMENT
22. DEPOSIT\_ACCT\_TRANSACTION
23. CREDIT\_ACCT\_TRASACTION

**Chapter 1**-Create the following views: Please show you **code** (query) and **result** of running your code. Such as:

1a:

SELECT \*

FROM EMPLOYEE\_DATA;

a. Employee\_data with the following attributes:

|  |
| --- |
| Name of Employee (first, middle, last) |
| Address |
| Zip code of Employee Address |
| SSN |
| Title |
| Current Year |
| Current Yearly Salary |
| Current Tax Deduction Rate |
| The date s/he was employed at the Current Branch |
| Birth Date |
| Age of Employee |
| Employee Branch Phone Extension s/he Works at |
| Branch Phone Number |
| Branch Name (Employee Works at) |
| Highest Degree |
| Highest Degree date |

b. Employee\_salary with the following attributes:

|  |
| --- |
| Name |
| Current Year |
| SSN |
| Current Salary |
| Branch Employee Works at |
| Total Cost of Employee Salaries at the branch s/he works |
| Highest salary at his/her branch |
| Average salary at his/her branch |

c. Branch\_data with the following attributes:

|  |
| --- |
| Branch ID |
| Branch Name |
| Address |
| Phone Number |
| Fax Number 🡨 to be inputted later |
| Number of Employee at this Branch |
| Category |
| Manager Name |
| Total Transactions Done at this Branch for year 2020 |

d. Valued\_Customers with the following attributes:

Describe how you select the important customers in this bank.

|  |
| --- |
| SSN |
| Name |
| Age |
| Home Phone |
| Work Phone |
| Address |
| Zip Code |
| Email 🡨 to be inputted later |
| State they live in |
| Total number of tractions the customer has done in a given year |
| Total amount (in bitcoin) of tractions the customer has done in a given year (you choose the year) |

e. Statistics\_by\_Branch with the following attributes (Read only view):

|  |
| --- |
| Branch Id |
| Branch name |
| Year |
| Total deposit in that year for this location |
| Total number of transactions |
| Total number of employees at this branch |

f, g-Create two more views that can be used by **customers**. (Make sure it is useful to the customers. You will be graded based on the usefulness of the views)

h, i-Create two more views that can be used by **management**. (Make sure it is useful for managerial decisions)

**Chapter 2**

a- Create a sequence called ID\_generator to be used for Account ID.

Start with 1111

Generate only odd numbers for security

Cache 50 numbers at a time

b- Create a sequence to be used for the Transaction ID. (Make your own assumption).