

# Ahsanullah University of Science and Technology

Department of Computer Science and Engineering

## PROJECT REPORT ON INVENTORY MANAGEMENT

**COURSE NO:** CSE 4126

**COURSE TITLE :** DISTRIBUTED DATABASE SYSTEMS LAB

**DATE OF SUBMISSION :** 30-08-2022

**Submitted To:**

**G. M. Shahariar**

Lecturer, Department of CSE, AUST.

**Sanzana Karim Lora**

Lecturer, Department of CSE, AUST.

**Submitted By:**

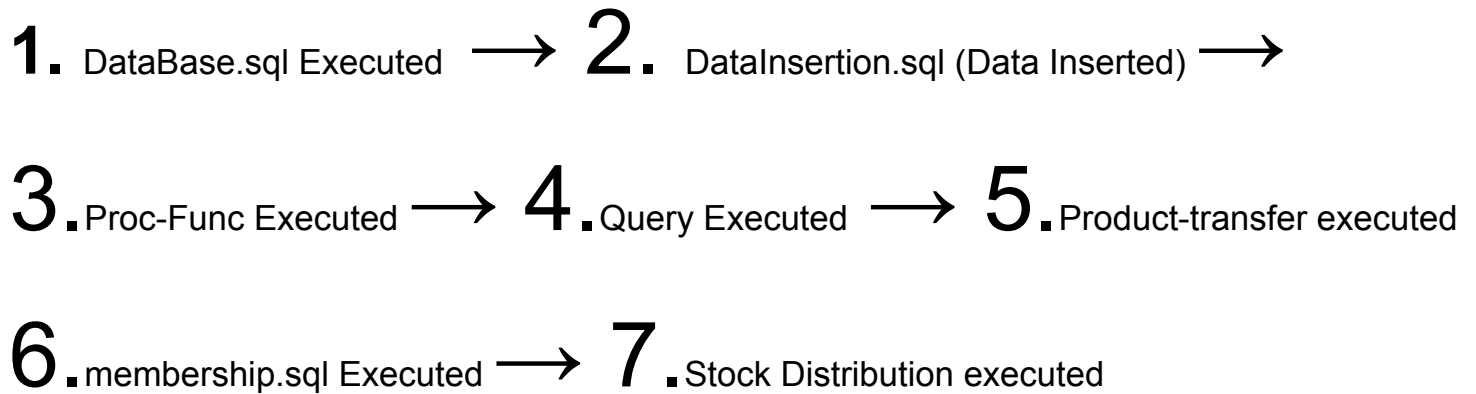
180204073 - Md. Rahat Ashik

GROUP : A2

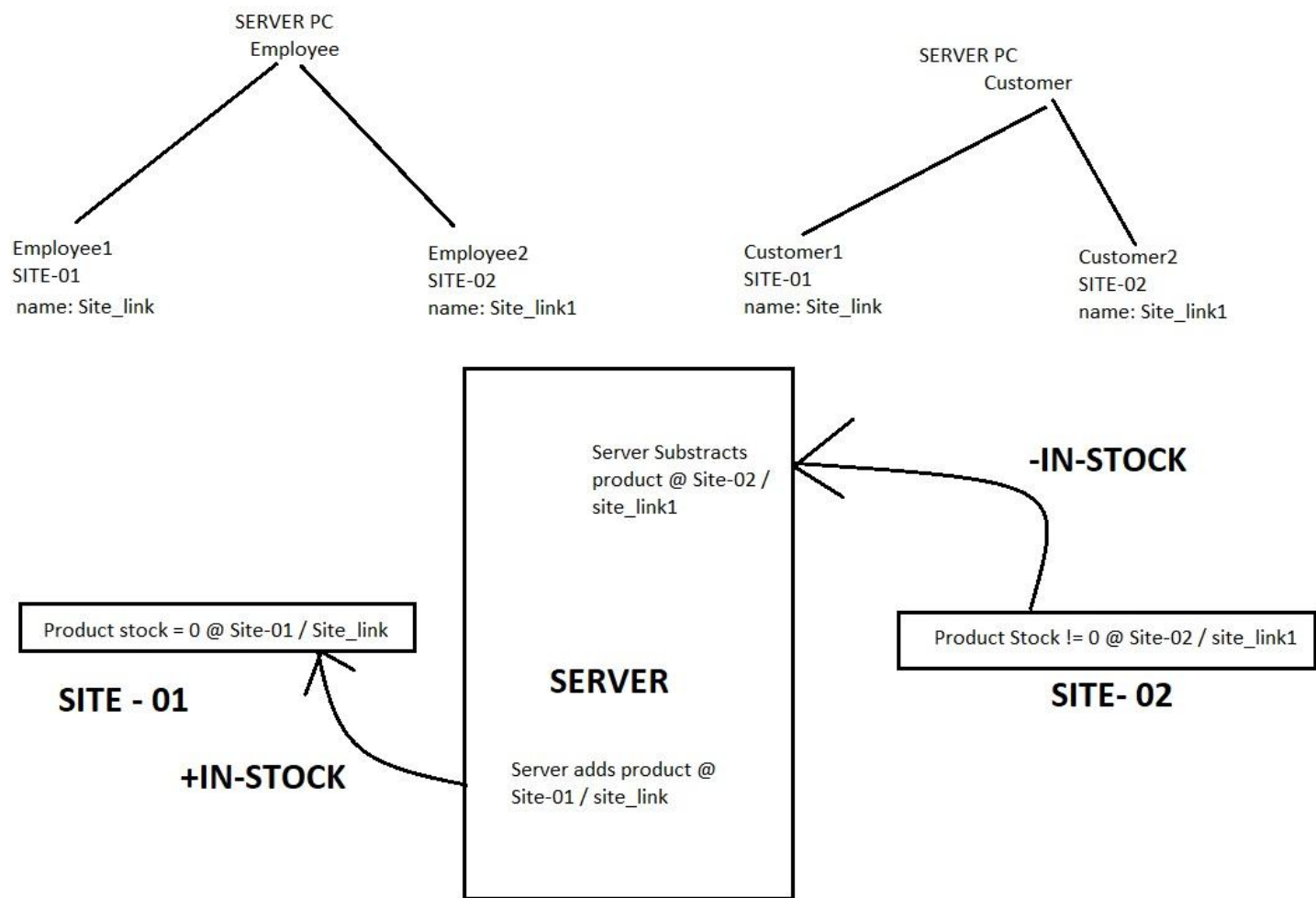
## ABOUT PROJECT :

“Inventory Management” is a project about the management of inventory of a clothing store. The inventory management is a distributed database system that is distributed over 2 branches (Sites -01 and 02) and a Server (Server -01). The whole project is implemented on oracle 10g Database and written on the language PL/SQL Here, we have a well defined database consisting of \*multiple relations , \*multiple attributes, \*multiple diverse tuples , \*fragmentation, \*lvl-03 Distribution transparency, \*autonomous functionality etc.

## WORKFLOW:



CORE FUNCTIONALITY:



## STRUCTURE OF THE DISTRIBUTED DATABASE:

The Inventory Management Distributed Database contains the following Files which makes the basic structure of the project:

- DataBase.sql :-
  - Contains 4 Relations as follows : Employee, Product , Customer, OrderDetail
  - Each relation contains Multiple Attributes
  - The special Feature of the relations is that Each primary key (ex:- EmployeeId) automatically starts its starting number and continues chronologically as the insertions are made accordingly. This is obtained by the Help of **TRIGGER**.
- DataInsertion.sql :-
  - Contains properly differentiated sql codes for insertion of data to the respective relations.
  - Contains unique Data each tuple.
- Proc-Func.sql :-
  - Here in this single file contains all procedures and functions
  - All are implemented properly
  - All the functions are Executed in the query.sql file
  - Inside the procedures and functions contains queries that has IF-ELSE-CASE-USER\_INPUT-CURSOR and other required features.
- product-transfer.sql :-
  - Here this sql file contains an autonomous feature of the project.
  - This file is about transferring product from one site to another and increasing and decreasing the stock number completely autonomously from the server.
  - It contains package-procedures-exceptions.
- membership.sql :-
  - This file contains the ability to provide membership to a customer who has spent a certain amount of money.
  - This also updates the membership in all possible branches and it is executed from the server.
- query.sql :-
  - This file contains all the required queries.
  - This file also executes procedures and functions from proc-func.sql
- stockDistribution.sql :-
  - The distribution of products from server to sites

## FEATURES IMPLEMENTED:

The features implemented :

- IF-ELSE
- SWITCH CASE
- CURSOR ( FOR LOOP )
- FUNCTION
- PROCEDURE
- USER INPUT
- PACKAGE
- EXCEPTION
- TRIGGER
- UNION
- PROMPT

## SOFTWARE REQUIREMENTS:

Softwares and languages used:

- ☐ Oracle 10g, Notepad++
- ☐ Language : PL/SQL
- ☐ Execution File: sqlplus.exe

## MY CONTRIBUTION:

- DataBase.sql :-
  - Employee Table + TRIGGER
  - Product Table + TRIGGER
  - Customer Table + TRIGGER
  - OrderDetail Table + TRIGGER
- DataInsertion.sql :-
  - Employee
  - Product
  - Customer
  - OrderDetail

- Proc-Func.sql :-
  - Procedure
    - IF -ELSE
- product-transfer.sql :-
  - Package
  - Autonomous Logic
  - Nested If-else
- membership.sql :-
  - Procedure
    - Union
- query.sql :-
  - Prompt
  - Switch - Case
- stockDistribution.sql :-
  - Procedure
    - If-Else

## CONCLUSION:

So the inventory management project's Distributed Database system is able to manage the inventory of our clothing system performing a wide range of queries and it also consists of autonomous systems. This is extremely useful for autonomy and controlling branches from a headquarter.