



AHSANULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

DISTRIBUTED DATABASE SYSTEM LAB

CSE 4126

Book Store Management

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October 11, 2018

1 Introduction

Book Store Management uses a simple database management system which connects the databases of multiple stores located in different cities. It can show a shop's total customer's information, details about Shop's monthly income and much more.

Currently we are testing this Distributed Database Management System in two stores located in two cities, Dhaka and Khulna.

2 Platform

- Oracle 10g.
- PL/SQL

3 Database Schema

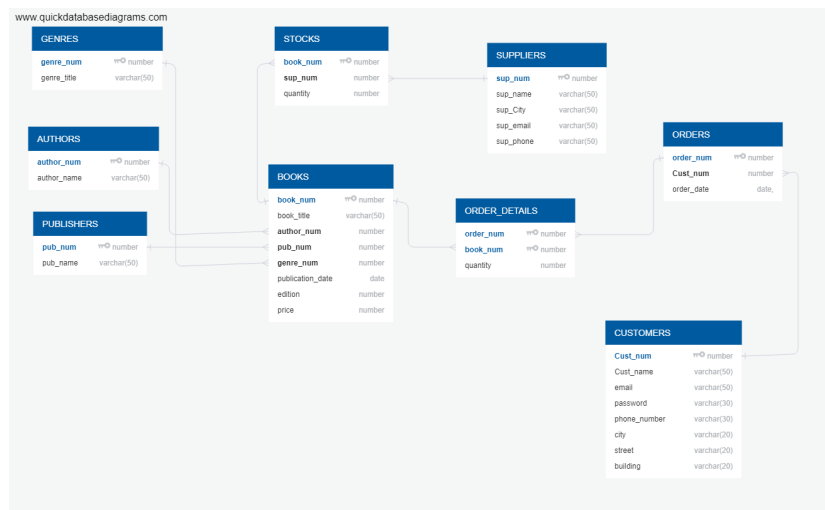


Figure 1: Database Schema.

4 Implemented Features

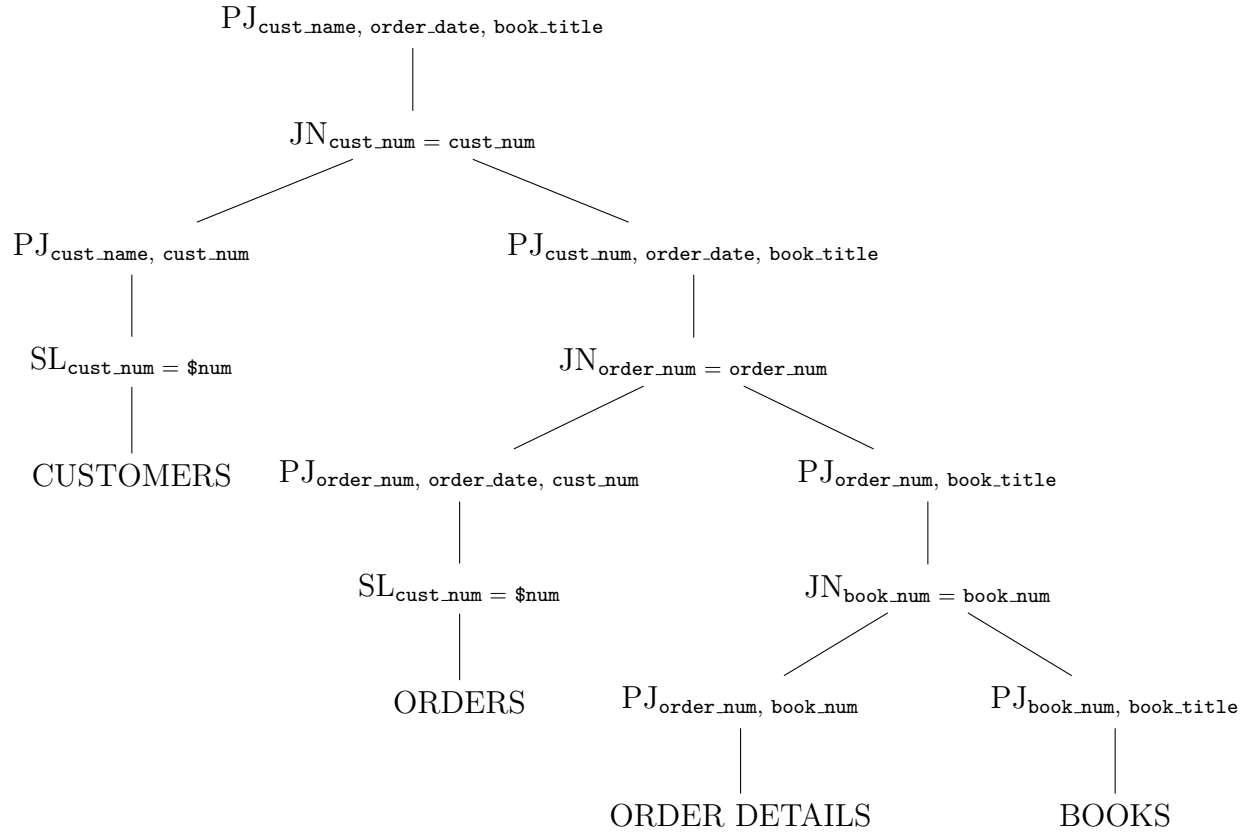
4.1 Transparency

We are able to simulate level - 3 distribution transparency. SQL code of our project using update steps are shown below:

```
update customers@site_link_dhaka
set cust_name = var_custName, email = var_email,
password = var_password, phone_number = var_phoneNumber,
city = var_city, building = var_building
where cust_num = var_custNum;
```

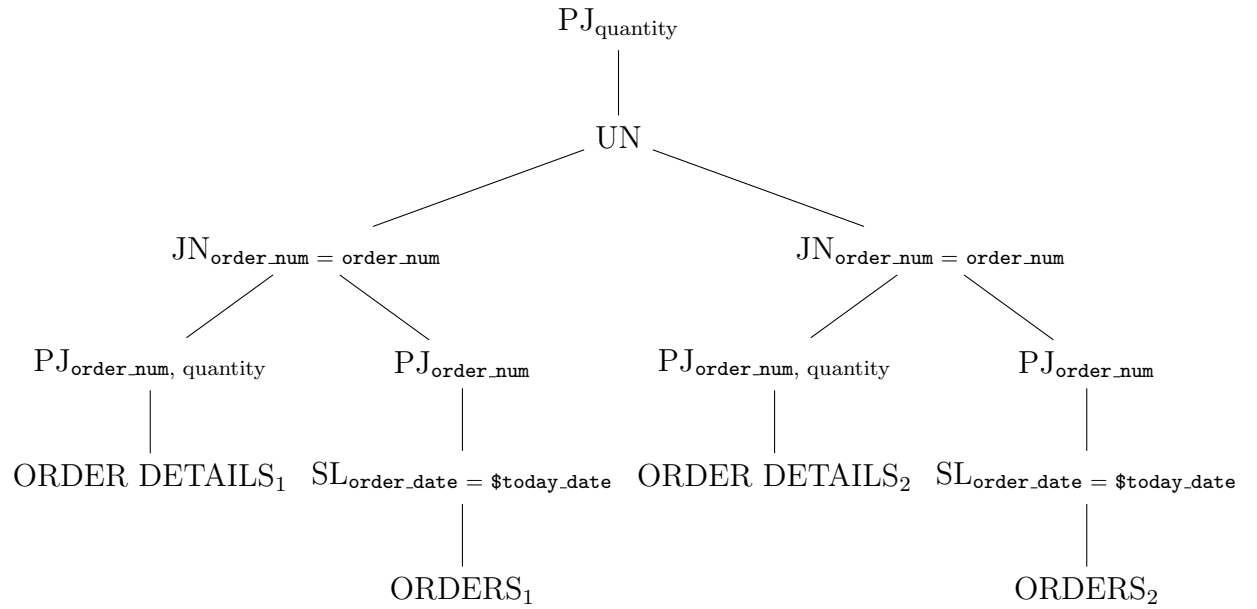
4.2 Operator Tree

Some of the operator trees for our project are simulated below:



4.3 Canonical expression

Some of the operator trees with canonical expression of our project are simulated below:



4.4 Semi Join

We are able to simulate semi-join programs for join queries. SQL code of our project using update steps are shown below:

```
select cust_name, order_date, book_title
from (select order_num, order_date, cust_name
from orders@site_link_dhaka union
select order_num, order_date, cust_name
from orders@site_link_khulna) ord inner join
(select order_num, book_num from
order_details@site_link_dhaka union
select order_num, book_num from
order_details@site_link_khulna) ordd on
ord.order_num = ordd.order_num inner join
(select cust_num, cust_name from
customers@site_link_dhaka union
select cust_num, cust_name from
customers@site_link_khulna where
cust_num = var_custNum) cus on
cus.cust_num = ord.cust_num inner join
(select book_num, book_title from
books@site_link_dhaka union
select book_num, book_title from
books@site_link_khulna) bo on
bo.book_num = ordd.book_num;
```

5 Future Plan

- Employee Payroll
- Printing receipt
- Discount System by studying Customer History
- implementing KNN Classifier
- Supplying Cost

References

- [1] McGraw Hill Osborne. [*Oracle Database 10G - The Complete Reference*].