

Assignment 2: DBS301

Group Number :5

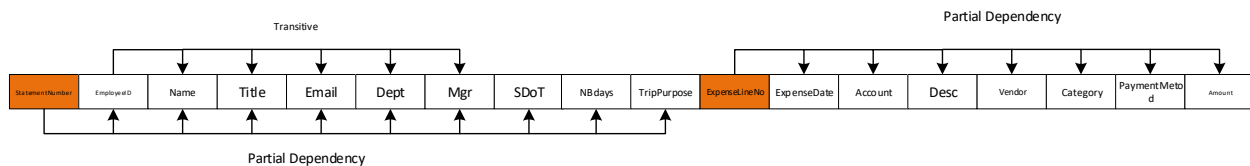
Group Members:

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- Imran Qureshi, Seneca ID 023966005

Question 1

UNF: User View

Expense (StatementNumber, EmployeeID, Name, Title, Email, Department, Manager, StartDateOfTrip, Nbdays, TripPurpose, {ExpenseLineNumber, ExpenseDate, Account, Description, Vendor, {Category}, PaymentMethod, Amount})



1NF: Ledger form

EXPENSE(StatementNumber, EmployeeID, Name, Title, Email, Department, Manager, StartDateOfTrip, Nbdays, TripPurpose)

INVOICE (StatementNumber, ExpenseLineNumber, ExpenseDate, Account, Description, Vendor, PaymentMethod, Amount)

CATEGORY(StatementNumber(FK), ExpenseLineNumber(FK), CategoryID, CategoryName)

2NF: No Partial Dependency

STATEMENT (StatementNumber, EmployeeID, Name, Title, Email, Department, Manager, StartDateOfTrip, Nbdays, TripPurpose)

EXPENSE (ExpenseLineNumber, ExpenseDate, Account, Description, Vendor, PaymentMethod, Amount)

CATEGORY (CategoryID, CategoryName)

BRIDGE(StatementNumber(FK), ExpenseLineNumber(FK), CategoryID(FK))

3NF: No non-key column affecting another non-key column

CATEGORY (CategoryID, CategoryName)

BRIDGE(StatementNumber(FK), ExpenseLineNumber(FK), CategoryID(FK))

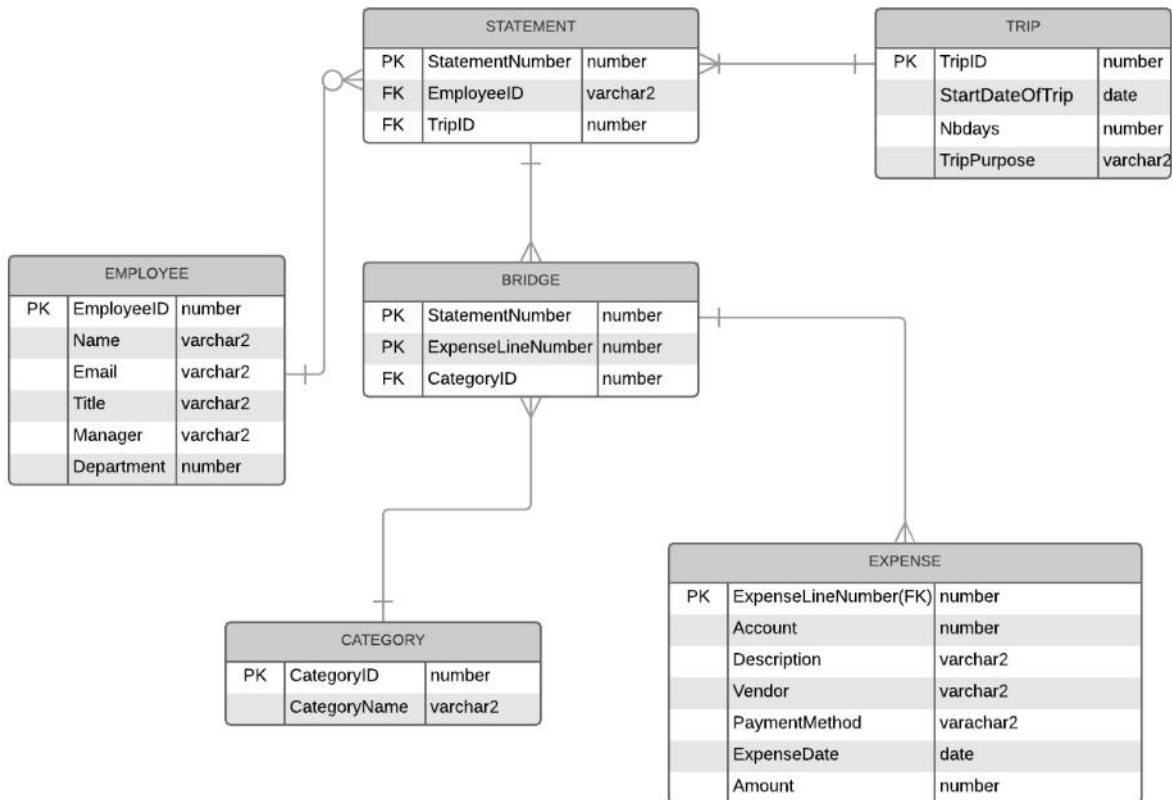
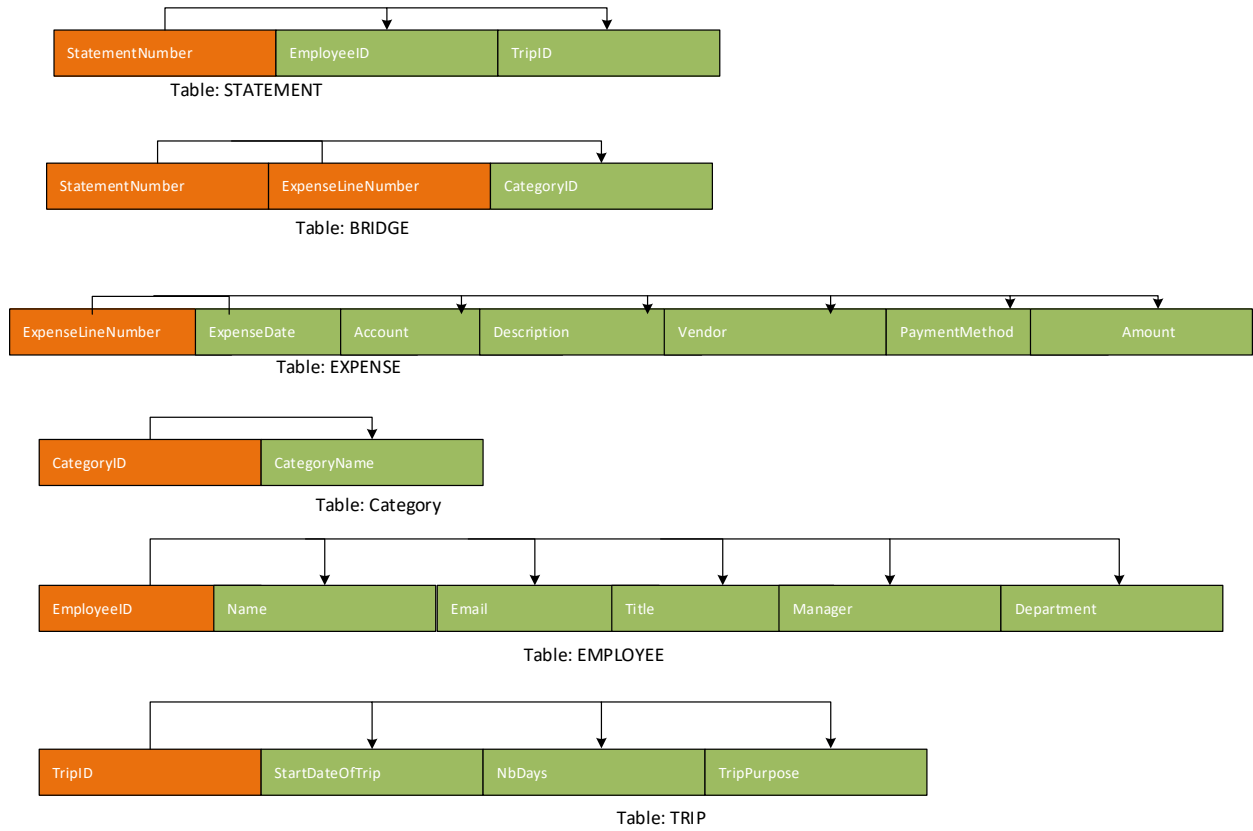
EXPENSE (ExpenseLineNumber, ExpenseDate, Account, Description, Vendor, PaymentMethod, Amount)

EMPLOYEE (EmployeeID, Name, Email, Title, Manager, Department)

TRIP (TripID, StartDateOfTrip, Nbdays, TripPurpose)

STATEMENT (StatementNumber, EmployeeID(F.K), TripID(F.K))

Q1b: Dependency Diagram that meets 3NF requirements

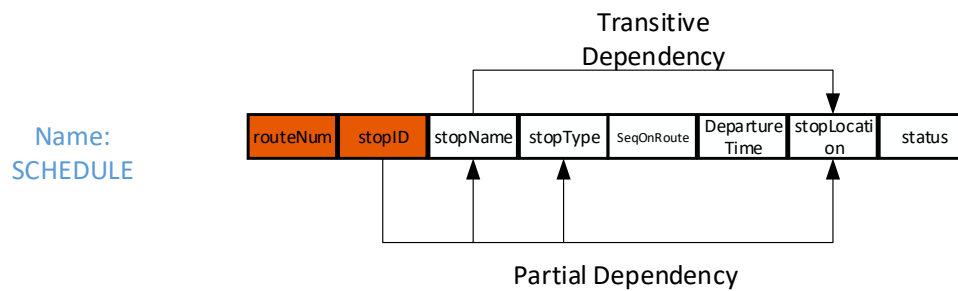


Question 2

UNF:

SCHEDULE (routeNum, stopID, stopName, stopType, SeqOnRoute, {DepartureTime}, stopLocation, status)

Justification: We can say that Departure time is a repeating column as routeNum and stopID make a unique combination otherwise.



1NF:

SCHEDULE (routeNum, stopID, stopName, stopType, SeqOnRoute, stopLocation, status)

DEPARTURE(DepartureTimeID, DepartureTime)

2NF:

STOP (stopID, stopName, stopType, stopLocation)

SCHEDULE (routeNum, stopID(FK), SeqOnRoute, status)

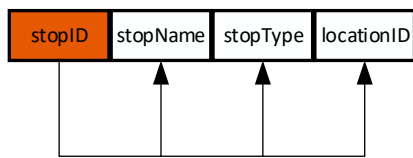
3NF:

STOP (stopID, nameID(FK), stopType, locationID(FK))

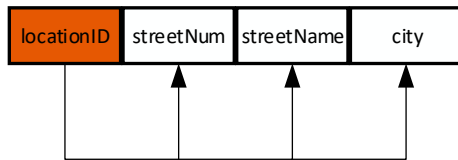
NAME (nameID, stopName)

LOCATION (locationID, streetNum, streetName, city)

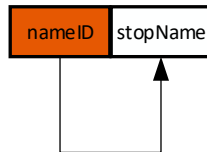
SCHEDULE (routeNum, stopID(FK), seqOnRoute, status)



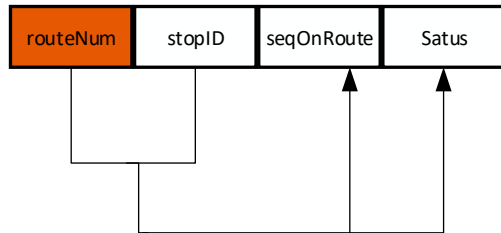
Name:
STOP



Name:
LOCATION



Name:
NAME



Name:
SCHEDULE

