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The idea of creation of this database was inspired mostly by Nortwind database with personal additions according to the task. The table Crew was added with comined keys TripID and DriverID so it would be possible to provide information about in which which vehicle which driver/s is/are sat.

The Employee table has an PK as EmployeeID because of uniqueness and FK as supervisorID that connect with EmployeeID because every worker has supervisor, excluded boss which has NULL. Every employee has Name,Lastname and Title (profession)

Products have unique ProductID as PK. Nvarchar(max) description and varchar(3) safety category because “III” is longest one.

Customers have unique CustomerID as PK. Everything else was taken from the task including possibility to NULL mail.

Vehicles have unique VINnumber as PK. Varchar(17) because as I know it is longest one. Also it have connection with Employees table throw personID FK.

OrderDetails have combined FK/PK keys for fully describing which to which Order (connection to OrderID) to which products(connection throw ProductID) exists.So 1 Order can have many Products.

Orders have unique OrderID and FK to connect to customers and consultants(EmployeeID)

TripInfo describes which vehicles are used to deliver the order.

More details in Excelfile.

We should make indexes such field that often take part in out SELECTION.

We definitely should index such field that that WHERE col=… (not always for >=,>,<=,< but still often)

Also that are GROUP BY and ORDER BY (Not always for ORDER BY)

Also that take part in JOIN…ON

We should not index fields that are used in Insert/Update/Delete/Having statements

Also every PK is indexed automaticly so we should not index it.

I indexed

CREATE NONCLUSTERED INDEX I\_ImportantOrderInfo ON Orders (TargetLocation);

Because I call it here

SELECT TargetLocation,DayofOrder, COUNT(\*) AS Ordercount from Orders group by TargetLocation,DayofOrder

So it would be faster. For same reason

CREATE NONCLUSTERED INDEX ImportantOrderInfo2 ON Orders (DayofOrder);

I indexed CREATE NONCLUSTERED INDEX ImportantOrderInfo3 ON Orders (SourceLocation);

Because I called it here WHERE SourceLocation <> TargetLocation

And I Indexed

CREATE NONCLUSTERED INDEX ImportantOrderInfo4 ON Orders (PickUpTime,DeliveryTime);

Because I called it here

SELECT distinct TOP 15 DATEDIFF(DAY,PickupTime,DeliveryTime)

"I certify that this assignment is entirely my own work, performed independently and without any help from the sources which are not allowed.”