Normalization

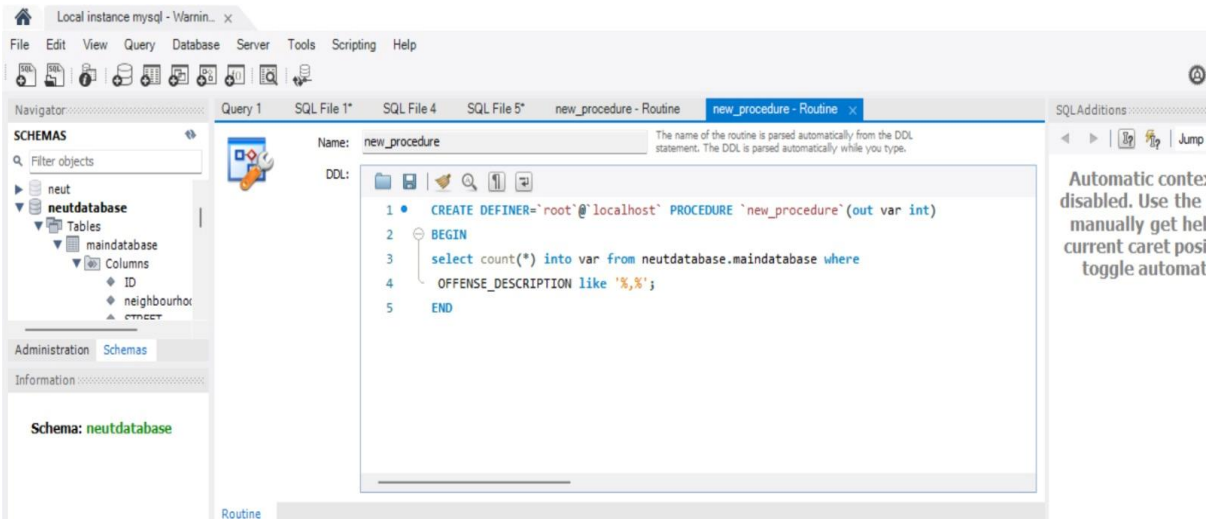
Topic Name- NEU Transportation System

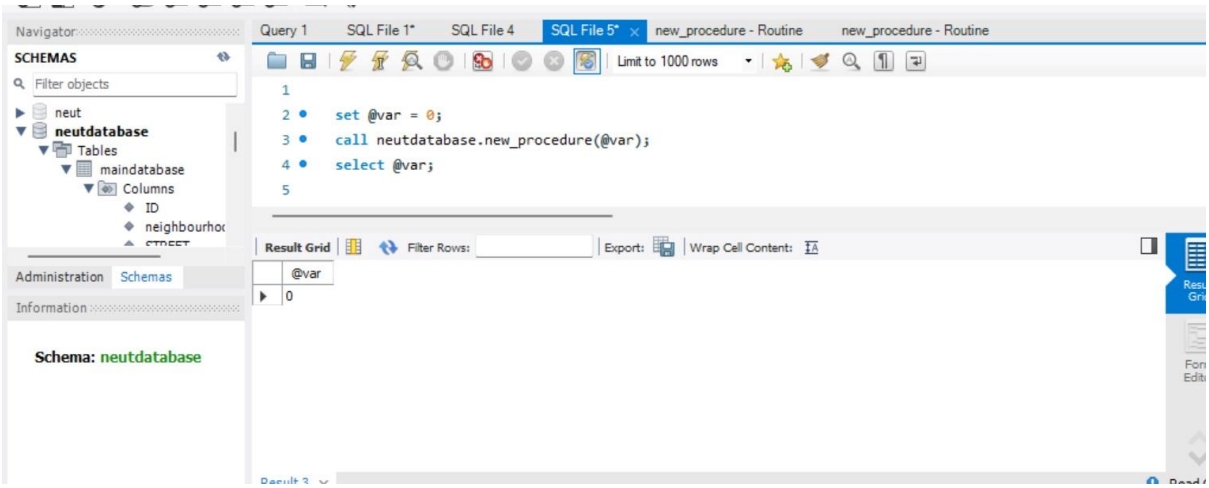
In the below process, we have checked whether our tables are in 1NF, 2NF and 3NF.

1NF:

Here, in order to check whether our table is in 1NF or not we have perfomed the following steps –

Step 1 – We have created a stored procedure named “new _procedure” in order to check whether the values in each column are atomic and there is no repeating groups.

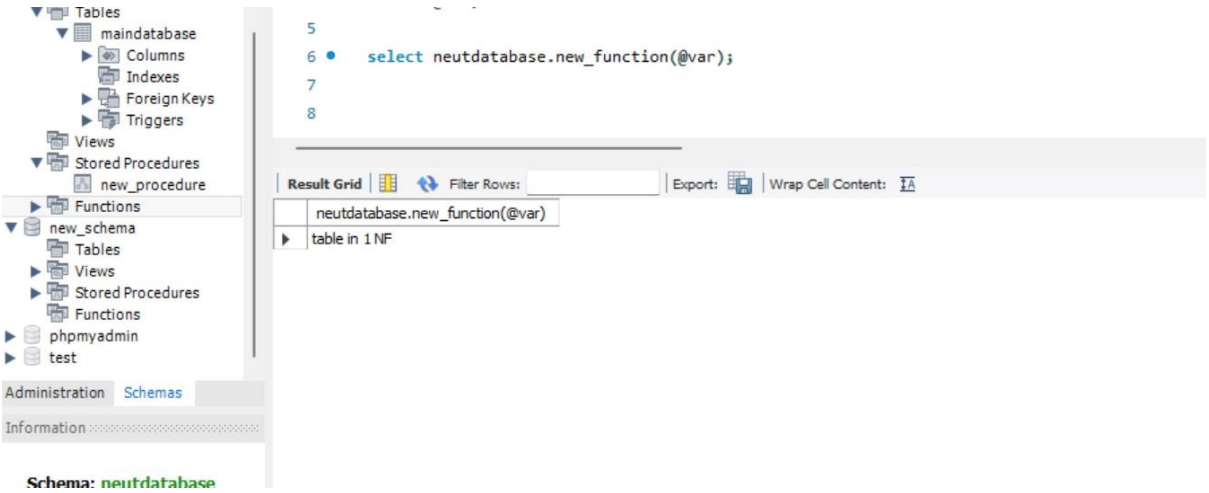




Step 2- Then we have created a function named “new_function” to check and display the result .

DDL:

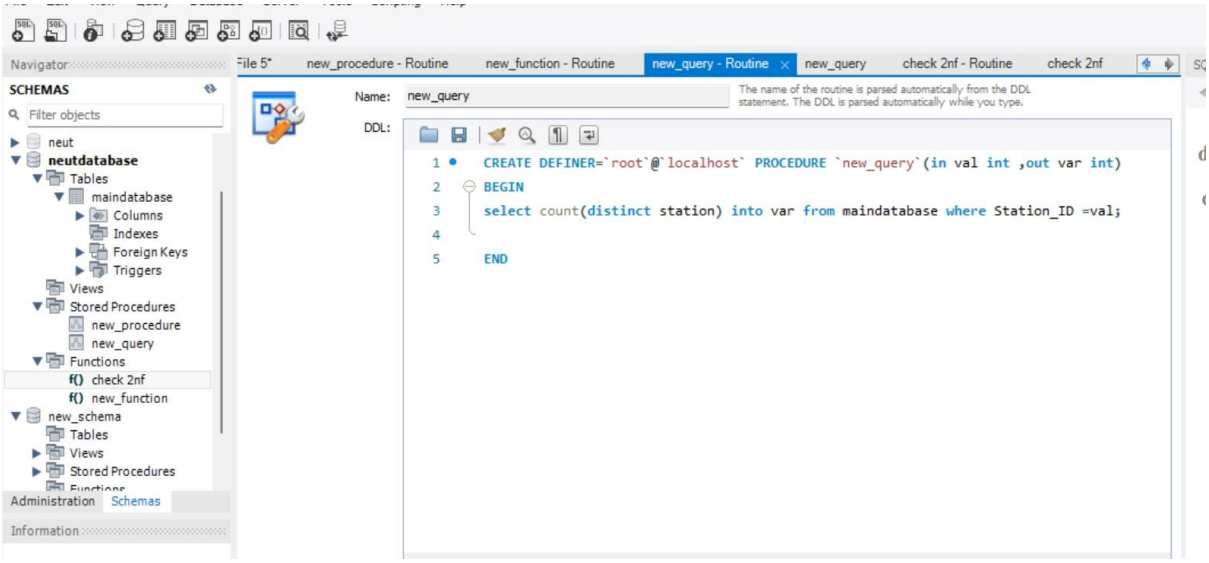
```
CREATE DEFINER=`root`@`localhost` FUNCTION `new_function`(a int) RETURNS varchar(20) C
    READS SQL DATA
    DETERMINISTIC
BEGIN
    declare result varchar(20);
    SET global log_bin_trust_function_creators=1;
    IF a>0 THEN
        SET result = "table is not in 1NF";
    ELSE
        SET result = 'table in 1 NF';
    END IF;
    RETURN result;
END
```

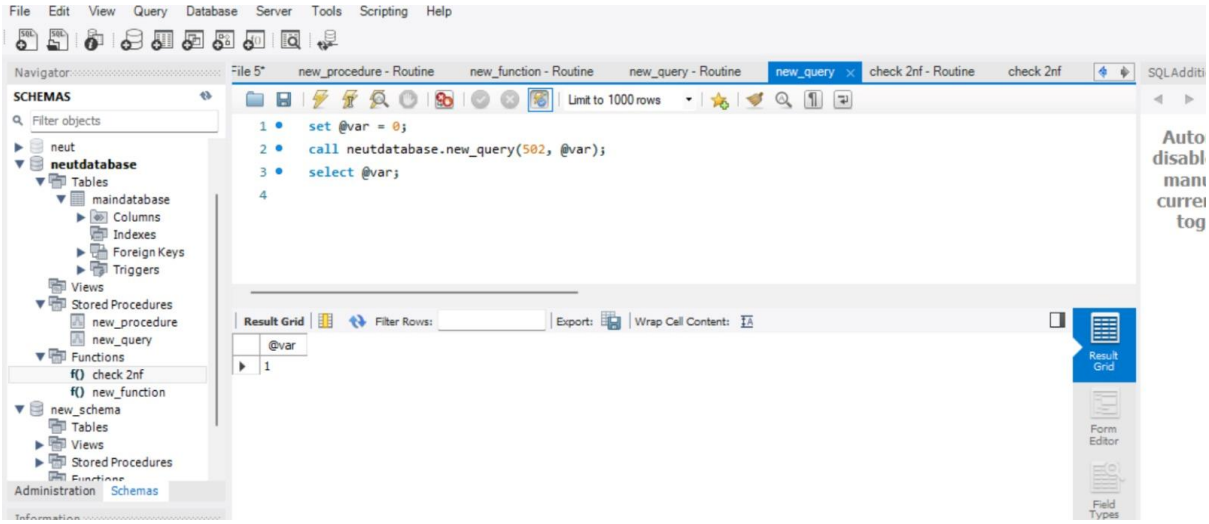


2NF:

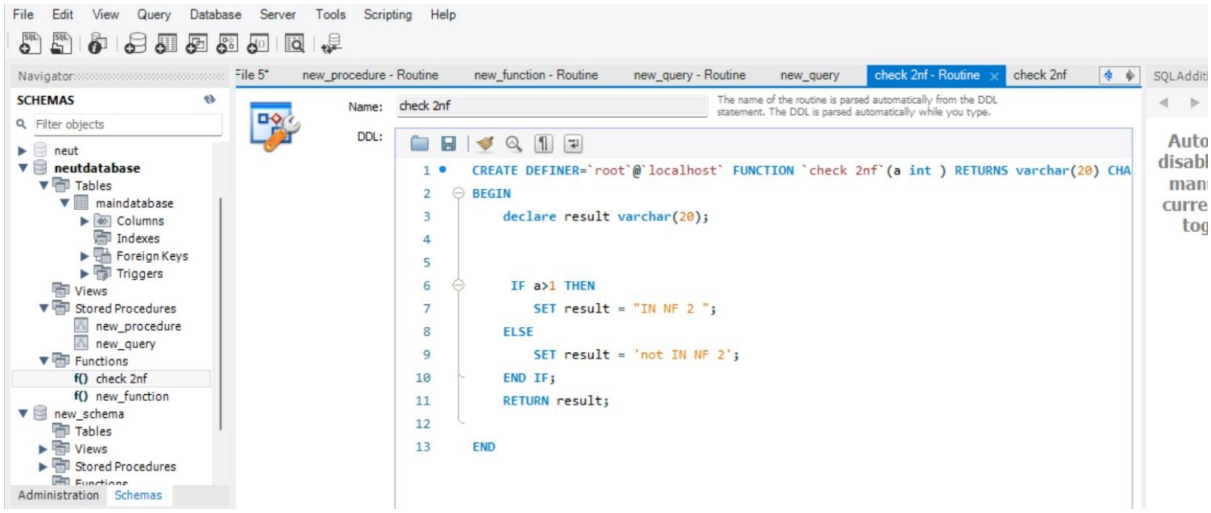
Here, in order to check whether our table is in 2NF or not we have perfomed the following steps –

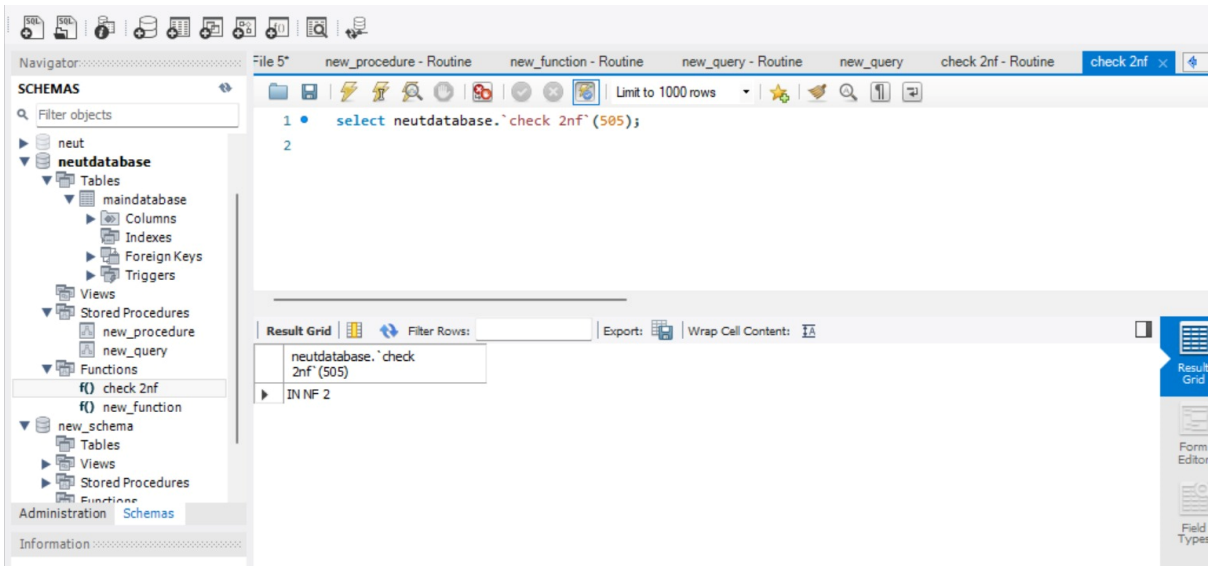
Step 1 – We have created a stored procedure named “new_query” in order to check that there is no partial dependencies.





Step 2- Then we have created a function named “check 2nf” to check and display the result .

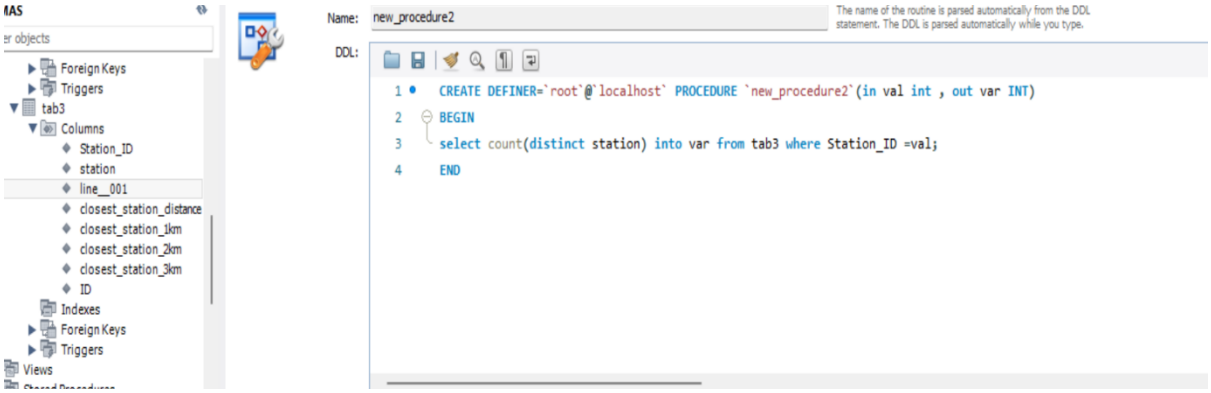


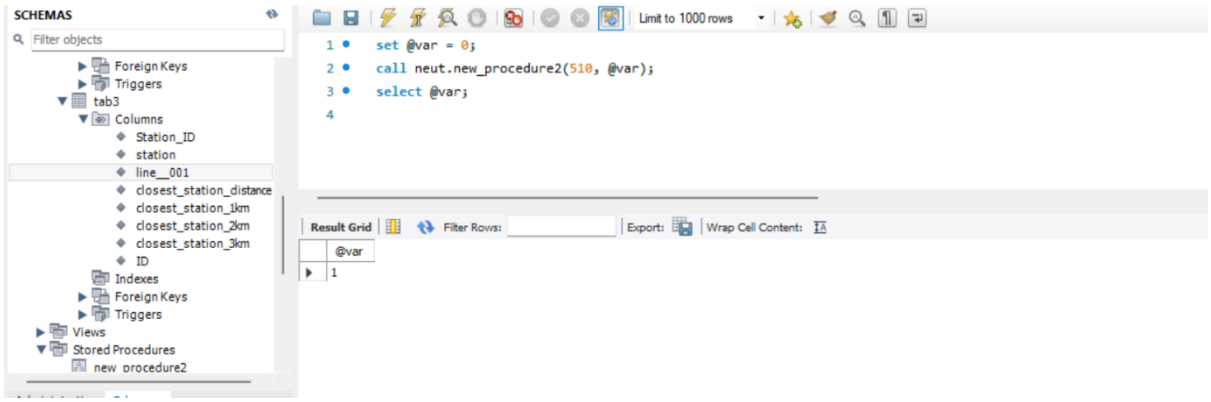


3NF:

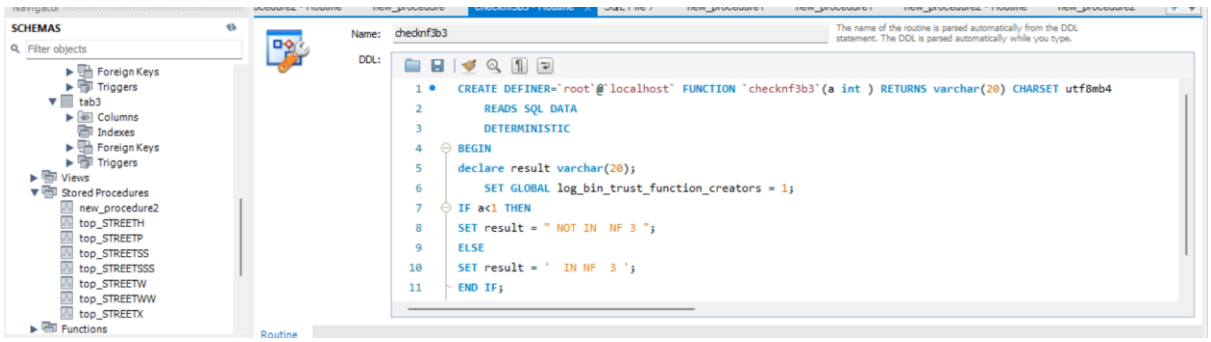
Here, in order to check whether our table is in 3NF or not we have perfomed the following steps –

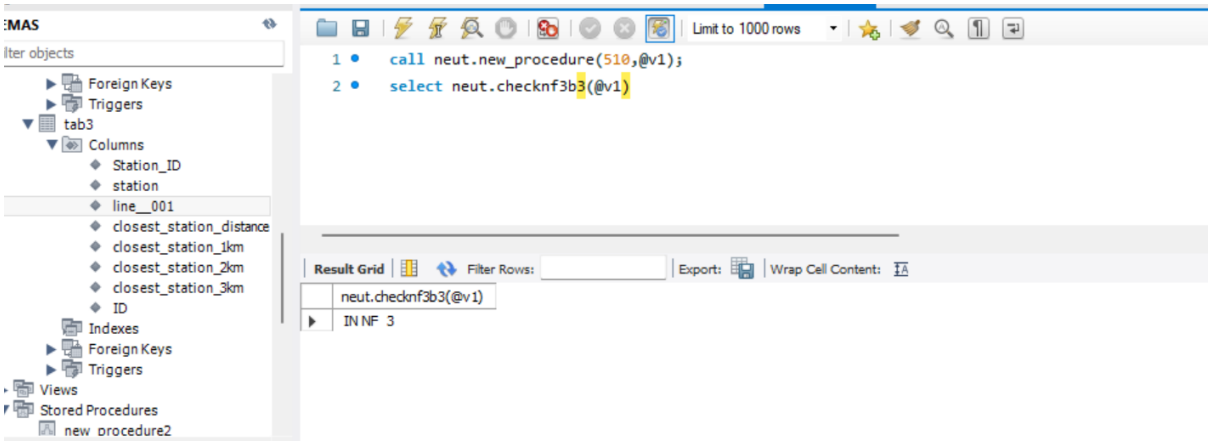
Step 1 – We have created a stored procedure named “new _procedure2” in order to check that there is no transitive dependencies.





Step 2- Then we have created a function named “checknf3b3” to check and display the result .




EMAS
Filter objects
Foreign Keys
Triggers
tab3
Columns
Station_ID
station
line__001
closest_station_distance
closest_station_1km
closest_station_2km
closest_station_3km
ID
Indexes
Foreign Keys
Triggers
Views
Stored Procedures
new_procedure2
Limit to 1000 rows
1 call neut.new_procedure(510,@v1);
2 select neut.checknf3b3(@v1)
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
neut.checknf3b3(@v1)
IN NF 3