

**CMSC 127 AY 2014-2015 First Semester
Practice Exercise on Normalization**

Full name (LN, FN MI): _____ Stud No: _____ Section: _____

INSTRUCTIONS: Carefully examine the schemas below together with the provided FDs and show the resulting relations after 1NF, 2NF and 3NF.

Note: All persons, groups, and companies described in this exercise are all but fictional. :-)

SCHEMA 01:

This schema is from Toyonda, an automobile manufacturing company known for their top of the line cars. Provide a normalized set of relations for this schema:

salesman_automobile(automobileId, carNameVersion, productionDates, assembly, class, layout, salesmanId, salesman, branchId, branchName, branchAddress, salesmanBranchName, salesmanBranchDateStart, salesmanBranchDateEnd)

Notes: A salesman can be assigned to a branch of Toyonda and then reassigned to another branch. Within a branch, a salesman is assigned with a set of automobiles according to class (e.g., sports car). An automobile can have many classes. ProductionDates has the format (YYYY1-YYYY2) where YYYY1<YYYY2 (e.g. 1973-2003)

FDs:

{automobileId} -> {carNameVersion, productionDates, assembly, class, layout}
{salesmanId} -> {salesman, salesmanBranchName, salesmanBranchDateStart, salesmanBranchDateEnd}
{ branchId } -> {branchName, branchAddress}

SCHEMA 02:

The following data entries are sample data that were hacked by AbsoWilkilutens, a white hacker group from HueFee EhlBee, from the giant company SehBen-Elf-Even during their start up rewards promo.

TransactionID	PaymentAmtInPHP	PointsEarned	CardNo	MobileNo	TransactionDate	TotalPoints
184567890811	50.00	1.00	456116	09141234567	10-24-2014 11:59:59	1034.00
184567890812	100.00	2.00	456116	09141234567	10-24-2014 15:34:07	1036.00
...

The following FDs were assumed:

{TransactionID}->{PaymentAmtInPHP, PointsEarned, CardNo, TransactionDate}
{CardNo}->{MobileNo, TotalPoints}