2nd Semester 2019-20

CSF 212 (Database Systems)

Home Assignment / Mini-Project

In view of the present situation, below mentioned revised plan will be followed.

Please note that this Assignment component consists of 2 modules.

It continues to be a group activity.

1. **Groups:** As specified earlier. Groups are already formed and the details are shared with IC by Class reps. No deviation is possible now.
2. **Final Demo**: It will be after we resume our work on-campus, and will be on your laptop, and all members of the group must be present.
3. **Viva** will also be conducted at the time of final Demo. And will be a significant component.
4. Any act of plagiarism will be taken to the Disciplinary Committee.
   Note: Any changes/corrections will be announced as required.

Evaluation pattern:

A.	**Demo**	**(includes implementation/coding)**	**14 Marks**
B.	**Viva**		**4 Marks**
C.	**For elegance**	**(only few best teams will be get these marks)**	**2 Mark**

Note that the vive will be taken for all modules together, after taking demo for all modules.

Prof R Gururaj,
IC CSF212; Dt: 01-April-2020.

Module-1: (10 Marks, including viva)

Write a program in Java to do the following.

For a given Relation (Table) with given attributes and set of FDs, identify the keys and check the highest normal form it satisfies. If the highest NF is *x* then suggest appropriate decomposition to take it to the (x+1) NF. Also identify the keys for the decomposed relations.

Test for losslessness and Dependency preservancy not required here.

Only up to BCNF NF.

Module-2: (10 Marks, including viva)

Write a program in Java to do the following.

Simulation of Extendible hashing scheme.

You can assume some initial GD , LD , hash-function and Bfr.

Your program should take keys input through keyboard and display the hashing scheme on the computer (preferably GUI). Display how the scheme evolves after each insertion, as discussed in the class.

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