Assignment 1:Database Management Systems

Code : ETCS-208   Marks: 05

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Note: i) Last date of submission:13 feb,2017.

ii) Only hand written assignment will be accepted.

iii) No assignment will be accepted after due date.

Ques1. What is the significance of weak Entity set?

Ques2. List the reasons why to introduced Null values in database?

Ques3. Explain the difference between total and partial constraints.

Ques4. Explain concurrent access anomalies.

Ques5. How to derive a Primary key from a given set of Super key?Explain with example.

Ques6. Consider the relational database of SCHEMA1. Give an expression in the relational algebra
to express each of the following queries:
a. Find the names of all employees who live in city"Miami".
b. Findthenamesofallemployeeswhosesalaryisgreaterthan 100,000.
c. Find the names of all employees who live in"Miami"and whose salary is greater than
100,000.

SCHEMA1: employee(personname,street,city)
works(personname,companyname,salary)
company(companyname,city)
SCHEMA2. branch(branchname,branchcity, assets)
customer(customername,customerstreet, customercity)
loan(loannumber,branchname, amount)
borrower(customername,loannumber)
account(accountnumber,branchname, balance)
depositor(customername,accountnumber)

Ques7. Consider the bank database of SCHEMA2. Give an expression in the relational algebra for
each of the following queries.
a. Find the names of all branches located in"Chicago".
b. Find the names of all borrowers who have a loan in branch"Down-town".

Ques8. Design a database for an automobile company to provide to its dealers to assist them in
maintaining customer records and dealer inventory and toassist sales staff in ordering cars.Each
vehicle is identified by a vehicle identification number (VIN). Each individual vehicle is a
particular model of a particular brand offered by thecompany (e.g., the XF is a model of the car
brand Jaguar of Tata Motors).Each model can be offered with a variety of options, but an individual
car may have only some (or none) of the available options. The databaseneeds to store information
about models, brands, and options, as well asinformation about individual dealers, customers, and
cars.Your design should include an E-R diagram, a set of relational schemas,and a list of
constraints, including primary-key and foreign-key constraints.