

**B. Tech. II (CSE) – Sem 4<sup>th</sup>**  
**Database Management System**

**Bank Variation Models for Assignment/Tutorial/Practical**

The following problems will be continuously studied throughout the subject.

**“Surat City” Bank:**

A well-established “Surat City” bank wants to create a database to manage bank details. The bank is having no sub branches. Bank is located in a particular city and is identified by a unique branch code. The bank monitors the transactions of its customers.

Customers can have only a single account in the bank. An account requires to maintain a pre-specified amount as minimum balance of Rs. 1000. The facility of cheque-book of 10 or 25 cheques is provided.

Bank is also managing the employee personal information and salary information. Employees are having a fixed salary. Employees belong to the same city.

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**“Gujarat State” BANK:**

A well-established “Gujarat State” bank wants to create a database to manage bank details. The bank is having sub branches in different cities and identified by unique branch code. The sub branch monitors the transactions of only that branch. The main branch of the bank monitors the transactions of customers of its own and other branches.

Customers can have many accounts in the bank, but not the joint accounts. An account requires to maintain a pre-specified amount as minimum balance of Rs. 1000. The facility of cheque-book of 25 or 50 cheques is provided.

Bank is also managing the employee personal information, salary information and dependent family members’ information. Employees are having a fixed salary. Employees belong to the same state.

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**“India Country” BANK:**

A well-established “India Country” bank wants to create a database to manage bank details. The bank is having sub branches in different cities of different states. Sub branches of banks identified by unique branch code. The city branch monitors the transactions of only that branch.

The main state branch monitors the transactions of customers of its cities only. The main national branch of the bank monitors the transactions of customers of its own, state branches as well as all cities.

Customers are having many Accounts in the same branch or different branches of cities/states. Customers should have Indian nationality. An account requires to maintain a pre-specified amount as minimum balance of Rs. 1000. The facilities of cheque-book of 50 or 100 cheques, debit card and credit card are provided.

Bank is also managing the employee personal information, salary information (full time or part time), dependent family members' information and property (home/vehicle) information. The bank employees are also customers.

There are employees like Manager, Account officers (level 1, 2 and 3) and peons. Account officer manages various customer accounts. Each branch has a manager under whom all other employees are working. The increment in salary varies based on the Account officers' level. Employees belong to any state of the country.

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**25th Jan 2021:**

Q.1 Design E-R diagram for "Surat City" Bank. Mention which constraints are not necessary while designing the E-R diagram.

Q.2 Design E-R diagram for "Gujarat State" Bank. Mention which constraints are not necessary while designing the E-R diagram.

**29th Jan 2021:**

Q.3 Design E-R diagram for "India Country" Bank. Mention which constraints are not necessary while designing the E-R diagram.