Database Requirements

1. The company stores demographic information about employees as well as customers like name, address, contact number, gender, date of birth, email id, etc. Employees need to have a Social Security Number (SSN) but customer need not have one in order to avail the telecom services.
2. The company needs to store CUSTOMER information like identification and its type in its database. For e.g.: Customer may be registered with the company using his/her SSN, driving license or passport. The company may also store CREDIT card information about the customer if the customer opts for automatic payment.
3. Each EMPLOYEE has SSN, work email, salary and manager details associated. An employee can be a TECHNICIAN or a customer service STAFF. Employees are allowed to avail telecom services similar to customers. Technician has details like area of supervision and availability status associated. Each customer service staff has a primary operation language that he/she operates in.
4. The company also stores a list of MOBILE NOS. (SIM) that it owns. Each SIM record contains details like mobile no., PUK, IMSI, Activate by date, status (available/unavailable) and whether it is prepaid or postpaid.
5. The company provides a host of MOBILE PLANS with details like plan id (unique), plan name, plan type (family, individual), payment type (prepaid/postpaid), bill duration (monthly, weekly, daily), talk time, data, charge, etc.
6. In addition to the normal mobile plans associated with an account, an individual mobile number can also be associated with multiple additional MOBILE SERVICES like international calls/messages, international roaming, radio service, data stash, caller tune, etc. Each of these service records will have a service id (unique), service name and a charge.
7. Apart from mobile services, the company also provides a host of other services like Wi-Fi, VOIP, Cable TV, Cloud services, Wi-Fi Dongle, etc. Each SERVICE has a service id (unique), service name and monthly charge.
8. Each Customer will have only one ACCOUNT. In case of a family plan, the account will be registered in the name of the primary account holder. Each account will hold details like account id, account password, security question and answer, activated date, billing address, bill type (paper/paperless), payment type (automated/normal), status (active/inactive) and balance.
9. Each customer who opts for mobile service is registered into the system by a staff member who allocates mobile numbers to his/her account from the available list of mobile numbers. The staff also has the responsibility to setup the account with appropriate mobile plans, mobile services or other services based on the customer’s request.
10. Each account is linked to zero, one (individual) or more MOBILE numbers (family plan). It is possible for an account to have zero mobile services but multiple other services like Cable TV and Wi-Fi.
11. The company stores BILLING information for accounts containing details like bill id (unique), cycle start and end date, payment due date, total charge and payment status.
12. The company also keeps details of the MOBILE TRANSACTIONS for each mobile number for customers to track their usages. Each transaction can be a CALL/TEXT/DATA transaction. Each transaction will have generic details like transaction id (unique), date and time. A call transaction will have additional information like number (recipient number in case of outgoing and caller number in case of incoming calls), minutes (call duration) and destination (place from where the call originated). A text transaction will have additional information like number, destination and direction (incoming/outgoing). A data transaction will also hold usage information.
13. Similarly SERVICE TRANSACTIONS (Wi-Fi, Cloud and Cable TV) are also maintained in the database. Each transaction holds details like transaction id (unique), date, time and duration of usage.
14. The company also focuses on the CUSTOMER SERVICE aspect and hence has a separate entity called customer service that holds the service/complaint id (unique), service description, service request date, service complete date, service status and service report. Each staff handles complaints related to accounts and assigns a technician to the complaint if necessary. The database keeps track of the call date and call report for each call handled by the staff and technician.