SCHOOL – CASE STUDY

ERD MODELING

FUNCTIONALITY SPECIFICATIONS:

1. ABC Bank is planning to automate its Savings Bank Operations. It offers many facilities like Savings Bank, Current account, Loan Account etc. The clients of the Bank open accounts in different branches. The client comes to the branch and puts through transactions like cash deposit, cash withdrawal etc. Walk-in Customers put through transactions like FX Sale and purchase. The teller will take care of data entry of all transactions. Cash Withdrawals above Rs10,000 require authorization by Officers; any withdrawal greater than Rs25,000 requires manager's sanction. Employees of the branch can also hold SB accounts with the branch.

2. A company's Purchase department buys various items from many vendors. Each vendor quotes a unit price for an item based on the quantity of items bought. The quotation from each vendor is collected by the Purchase Department and stored in a Purchase Catalog.

3. Users are authorized to work on one or more workstations. Some users may not be authorized to work in any workstation at all. Each authorization carries a priority and a set of access privileges. A user has a home directory for each of the workstations in which he is authorized to work. The same home directory can be shared among several workstations or among several users.

4. A person may have up to three companies as employers. Each person has an id. Cars may be owned by persons, companies or banks. A car is assigned an id. Car Owner id is the id of the person, company or bank who owns the car. A car loan may be involved in the purchase of a car. Loans can be given only by a Bank. A Bank may take a loan from another bank, during the purchase of a car.

DATABASE DESIGN:

1. Create a DATABASE: SCHOOL

2. Create a secondary filegroup and assign a couple of files to it.

3. Make the secondary filegroup as the default filegroup.

4. Create the below tables. Place them in different filegroups if they are to be used in joins.

CREATE THE FOLLOWING THREE TABLES WITH SAME NAMES AND DATA TYPES AS PROVIDED BELOW:

Course Master

Column Name	Data Type	Remarks
CID	Integer	Primary Key
Name	Varchar (40)	NOT NULL
Category	Char(1)	Basic/Medium/Advanced
Fee	Smallmoney	NOT NULL

Student Master

Column Name	Data Type	Remarks
SID	TinyInt	Primary Key
Name	Varchar (40)	NOT NULL
Origin	Char(1)	Local/Foreign
Type	Char(1)	UnderGraduate/Graduate

Enrollment Master

Column Name	Data Type	Remarks
CID	Integer	Foreign Key
SID	Tinyint	Foreign Key
Date of Enrollment	DateTime	NOT NULL
Fee Waiver Flag	Bit	NOT NULL
Grade	Char(1)	O/A/B/C

USING THE ABOVE TABLE LAYOUTS AS SCHEMA, WRITE T-SQL STATEMENTS FOR THE FOLLOWING REQUIREMENTS:

1. List the course wise total no. of Students enrolled. Provide the information only for students of foreign origin and only if the total exceeds 10.

2. List the names of the Students who have not enrolled for a given course.

3. List the name of the advanced course where the enrollment by foreign students is the highest.

4. List the names of the students who have enrolled for at least one basic course in the current month.

5. List the names of the Undergraduate, local students who have got a "C" grade in any basic course.

6. List the names of the courses for which no student has enrolled in the month of May 2006.

7. List name, Number of Enrollments and Popularity for all Courses. Popularity has to be displayed as "High" if number of enrollments is higher than 50, "Medium" if greater than or equal to 20 and less than 50, and "Low" if the no. Is less than 20.

8. List the most recent enrollment details with information on Student Name, Course name and age of enrollment in days.

9. List the names of the Local students who have enrolled for exactly 3 basic courses.

10. List the names of the Courses enrolled by all (every) students.

11. For those enrollments for which fee have been waived, provide the names of students who have got 'O' grade.

12. List the names of the foreign, undergraduate students who have got grade 'C' in any basic course.

13. List the course name, total no. of enrollments in the current month.

STORED PROCEDURE

USING THE ABOVE TABLE LAYOUTS AS SCHEMA, WRITE A STORED PROCEDURE FOR THE FOLLOWING SPECIFICATIONS:

Input Parameters:

Date From (Mandatory), Date To (optional, if not specified, take the current date), & Student ID (Mandatory)

Requirements:

Course-wise, enrollment-wise in ascending order of course name to be printed. If no enrollment exists for a given course for the period specified, print course name and the remarks 'No enrollment for this period'

Enrollment Details of <Student Name > from <FromDate> To <ToDate>

Origin :   Type:

SL. No	Course Name	Date of Enrollment	Fee Waiver? (Yes/No)	Grade
…	…	……	……	……
…	…	……	……	……
		Total No. of Courses Enrolled:		

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