DBD MSSQL – Lab 05

PREPARATION :

a. **Knowledge** :
   - Basic functions on SQL Server Management Studio.
   - Language : DDL, DML

b. **Tools** :SQL Server Management Studio

c. **Skills** :
   - Able to use the basic operation with SQL
   - Able to use the basic SQL

WORKS :

Write a script to create database named "QLHV" (student management)

And a script to create so table follow these requirements (constraint is bound):

1. Batchs :Stores information about class, contains :
   - BatchID : char(6) – Class ID – Primary Key(PK)
   - Year : int – school year – not null
   - Time : varchar(20) – Class duration (Ex : 13h30 – 17h30)
2. Students : Stores Student 's information, contain :
   - StdID : int – StudentID – Main Course(PK), Identity
   - FirstName : varchar(50) – First name and Middle name – Not Null
   - LastName : varchar(50) – Last name – Not Null
   - BatchID : char(6) – Class ID – Foreign Key (FK) , Not Null
   - Birthday : Datetime – Birthday
   - Address : varchar (100) – address – default "Ha Noi"
   - Email : varchar (50) – Email – Unique
3. Marks : Contain columns :
   - StdID : int – Student ID – Foreign Key, Not Null
   - Subject : varchar(10) – Subject – Not Null
   - Type : char (1) – Mark type (W-theory(writing), P-practice)
   - Mark : decimal (4,2) – Mark – Mark condition >=0 and <=25

     StdID, Subject and Type combined into Primary Key (PK).

Use DML to do following works :

1. Delete the Primary Key and Foreign Key from tables with T-SQL (**Only delete the content, not the columns**)
2. Create a new Primary Key and Foreign Key for those tables with initial request .
3. Add 2 columns for table "Batchs":
   - ClassRoom : tinyint
   - LabRoom : tinyint
4. Add information in those columns.

Write script to insert data into tables following these images :

- Batchs table :

BatchID	Year	Time	ClassRoom	LabRoom
C0809I	2008	13h30 - 17h30	1	1
C0812I	2008	13h30 - 17h30	2	2
C0909L	2009	17h30 - 19h30	2	2
T0906G	2009	7h30 - 11h30	1	1
T0908I	2009	13h30 - 17h30	3	3
T0909G	2009	7h30 - 11h30	2	2

- Student table :

StdID	FirstName	LastName	BatchID	Birthday	Address	Email
1	Nguyen Van	A	C0909L	12/3/1987 12:00:00 AM	Ha Noi	anv@yahoo.com
2	Tran Thi	B	T0909G	8/13/1988 12:00:00 AM	Hai Phong	btt@yahoo.com
3	Nguyen Van	C	T0909G	11/25/1984 12:00:00 AM	Nam Dinh	cnv@yahoo.com
4	Le Thi	D	T0908I	6/27/1987 12:00:00 AM	Hoa Binh	dlt@yahoo.com
5	Tran Van	E	T0906G	11/21/1987 12:00:00 AM	Ha Noi	etv@yahoo.com

- Marks table:

StdID	Subject	Type	Mark
1	CF	W	12.50
1	C	W	15.25
1	C	P	14.00
2	CF	W	14.50
2	C	P	16.50
3	C	W	18.00
3	C	P	17.00
4	CF	W	13.50
4	C	P	15.50
5	C	W	12.50
5	C	P	17.50

5. Display C program 's mark (including writing and practice) of student from class (T0909G) following these requirement :

Student ID	Name	Point type	Mark
2	Tran Thi B	P	16.50
3	Nguyen Van C	W	18.00
4	Nguyen Van D	P	17.00

6. List of students (sort from A-Z) :

Student ID	Name	Yearbirth	Class	
1	Tran Thi B	1987	C0909L	2009
2	Nguyen Van C	1988	T0909G	2009
….	…..	…..	…..	….

7. List of students that have good marks (mark >=16.5)
8. Write script to refresh table “Subjects” contains columns :
    - SubjectCode : varchar (10) – Primary Key
    - Description : varchar (100)
    - Theory : tinyint
    - Lab : tinyint
9. Copy Subjects (subject column) from “marks” table to “Subjects” table with required values of “Subjects” column to “SubjectCode” column. Result :

SubjectCode	Description	Theory	Lab
C	*NULL*	*NULL*	*NULL*
CF	*NULL*	*NULL*	*NULL*

10. Use SQL to update those columns that have NULL value of Subjects :

SubjectCode	Description	Theory	Lab
C	Elementary Programming with C	11	13
CF	Computer Fundamentals	4	4

11. Add “Foreign Key” attribute for “subject” column of “Marks” table(Use Alter) To the SubjectCode column of the Subjects table.