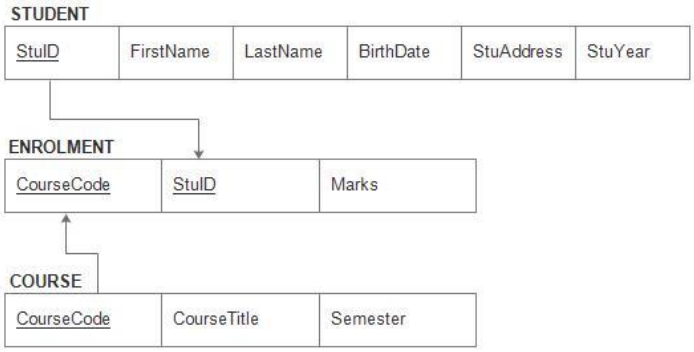
SQLite PRACTICAL SESSION

In this practical, you will be required to create android SQLite database application for student results to record information of student, courses and their results.

Database is represented by schema as shown in the bellow figure

RELATIONAL SCHEMA



DATA DICTIONARY

STUDENT		**Example**	**DescriptionOfData**	**DataType**	**Constraints**
PK	**StuID**	1, 2, 3…	Incremented integer value	Int	- Primary Key. - Not Null – Not empty
	FirstName	Sara	Character of big size up to 20,	varchar(20)	- NOT NULL
	LastName	Tankred	Character of big size up to 20	varchar(20)	- NOT NULL
	BirthDate	1999-5-19	Date Only	Date	- NULL
	StuAddress	Amani	Character of big size up to 30	varchar(30)	- NOT NULL
	StuYear	1,2,3,4,5	Integer value between 1-5	Int(1)	- NOT NULL

COURSE		**Example**	**DescriptionOfData**	**DataType**	**Constraints**
PK	**CourseCode**	CS 001 CS 002	Start with CS followed by 3 digits number	varchar(10)	- Primary Key. - Not Null – Not empty
	CourseTitle	Database Systems	Character of big size up to 30	varchar(30)	- NOT NULL
	Semester	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Integer value between 1-10	Int(2)	- NOT NULL

ENROLMENT		Example	DescriptionOfData	DataType	Constraints
PK	**CourseCode**	Previously defined in COURSE Table	CS 001 CS 002	varchar(10)	- Foreign Key. - Not Null – Not empty
	StuID	Previously defined in STUDENT Table	1, 2,3, ..	Int	- Foreign Key. - Not Null – Not empty
	Marks	0,1,2,3,…	Integer from 0 to 100	Int(3)	- NOT NULL

Indore to complete this practical you will be required to perform the following tasks

(A) Start a new Project

(B) Creating Model Classes for Tables

The model classes should have constructors and member functions like set and get methods

(C) Database Helper Class

- ✓ Database helper class contains all the methods to perform database operations like opening connection, closing connection, insert, update, read, delete and other things. As this class is helper class, place this under helper package.
- ✓ So create another class named DatabaseHelper.java and extend the class from SQLiteOpenHelper

Example:

```
public class DatabaseHelper extends SQLiteOpenHelper
{ }
```

- ✓ Add required variables like database name, database version, column names. I also executed table create statements in onCreate() method. Type the following code in DatabaseHelper.java class

(D) CRUD (Create, Read, Update and Delete) Operations

To efficient creating CRUD operations. Create databaseHelper adapter class to be the outer class of DatabaseHelper class(make DatabaseHelper to be inner class of the DatabaseHelperAdapter class)

Example:

```
public class DatabaseHelperAdapter{
static class DatabaseHelper extends SQLiteOpenHelper {

      }
}
```