Phase 2 – Project 1

Lerner’s Academy

# 1- Project description

A website that manages school system. The main functionality is to manage the **subjects, classes and teachers.** An **Administrator** manages those functionalities, he is the only user to this website. The **Administrator** can do several things which are listed below.

The admin can do (features):

* Add new Subjects
* Add new classes
* Add new teachers
* Assign subject to a class
* Assign Classes to the teachers
* Show the list of **Students** (you generate the students)

# 2- What is required?

* Database

The database is required to store the **subjects, classes and teacher’s** information.

Also store the **students** and the generated table of many-to-many relation(teachers-classes).

* Java Dynamic Web Project

To create and control **HTML/JSP** pages via servlets.

# 3- The Database

The database has several **Entities** that may have a constrains**:**

* Subject
  + To store subjects. You decide which columns to be included,

Example: id, name

* Classes
  + To store classes. You decide which columns to be included,

Example: id, roomNo, Subject\_id

There is a Foreign Kye constrain (Subject\_id) from **Subject** Entity.

One of the requirements is that a class has to have one subject assign to it, Hence, you have a Foreign Kye constrain (Subject\_id).

* Teachers
  + To store teachers. You decide which columns to be included,

Example: id, name, e-mail

There is a many-to-many relation with **classes** Entity, because a teacher can have many classes to teach, hence, a new Entity is required to store teacher and classes information, you may name it **Teacher\_Classes.**

* Teacher\_Classes
  + To store teacher classes. It has two columns that hold the id’s.

Example: Theacher\_id, Class\_id

There is a Foreign Kye constrains, (Teacher\_id) from **Teachers** Entity, and

(Class\_id) from **Classes** Entity.

* Students
  + To store the student information. You decide which columns to be included,

Example: id, name, e-mail, class\_id

There is a Foreign Kye constrain (class\_id) from **Classes** Entity.

One of the requirements is that a **student** has to have one class assign to it, Hence, you have a Foreign Kye constrain (class\_id).

# 4- Web Pages

Web pages you might have:

* Login page
* Menu page (to select one of the features that administrator can do)
* Add new Subject (feature) page
  + The fields are the **Subjects** Entity columns.
* Add new classes (feature) page
  + The fields are the **Classes** Entity columns.

The **Assign subject to a class** feature is included in this page.

For example: you can have it as dropdown menu (for the Subject\_id column).

* Add new teacher (feature) page
  + The fields are the **Teachers** Entity columns.
* Assign classes to the teacher (feature) page
  + The fields are the Teacher\_Classes Entity columns.

For example: you can have it as dropdown menu.

* Show the list of **Students** (feature) page (you generate the students)
  + A table to show/list the student and their information.