

## ASP .NET MVC Project

We aim to build a project which will be used to manage functionality related to ITI such as student attendance, courses, instructors, departments ITI system consists of the following main entities

- student ( id, fname , lname , birthdate, ismarried , email ,...)
- department ( dept\_id , dept\_name , capacity,.... )
- Instructors ( inst\_id, name , birthdate , ismarried , qualifications , graduationYear , status{internal,external : has no department},...) –
- courses ( code , crs\_name ,lect duration,lab duration).
- Exam (id , duration , subject , from , to,... )
- questions( header, body , answers, correctanswer, subject , ... )
- instructor evaluation
- student degrees in exams

Assume any missing data

Add any missed classes to track student attendance,, and so on.

- Official vacations ( id, name , startdate, enddate )
- Student Attendance (Date , ArrivalTime , leavingTime )
- the system will calculate the attendance degree of students (as iti rules )

### Relations

- 1- the student assigned only to a one department and department contains many students.
- 2- the instructor may be assigned to one department and department contains many instructors.
- 3- the department has one manager (internal instructor ). And instructor manage only one dept
- 4- the course may be delivered in one or many departments.
- 5- the instructor may teach one or more course and the course may be delivered by many instructors.
- 6- the system has to save the instructor who deliver a course to a specific department and his evaluation and the status of the course ( finished or not ).
- 7- the system has to save the arrival and leaving time of each student in a specific date.
- 8- the system has to save degree of each student in each exam course.
- 9- Exam contains many questions and question may appears in many exams
- 10- Assume any missing relations according to ITI System

We want to build a controllers and views for the system as following (use only empty controllers templates )

**Note: any delete operation will set the relation foreign key to null.**

1- Department controller : assigned to one member in the group.

a- CRUD operation ( list , create , Edit , Delete ): use ajax call in delete and edit operations. b- action that takes a departmentid and show the details of this department and students in this department, the view will has a dropdown list for departments and when index changed the list of student will be changed ( use ajax call).

c- action that takes the department id and show list of instructor who works in this department : as the previous view without using of ajax, the instructor who act as the manger of the department must be with a green background color.

d- action that takes a departmentid and lists the courses in this department.

e- action that used to change the manager of a department. It takes a departmentid and lists the instructors in this department to select one of them to act as a manger ( use radio button in list ).

f-use excel file to add data of a number of departments.

2- Student controller : assigned to one member in the group.

a- CRUD operation ( list , create , Edit , Delete ): use ajax call in delete and edit operations. Also you will not add a student to a department if the number of students in this department equal to the capacity of the department. In this case set the student department to null

b- use excel file to add data for number of students.

c- action that is used to add number of students to a specific department: the view contains a dropdown list for departments. And list of students who are not in a department. Each entry in the list has a check box to select or deselect a student. When data submitted the selected student will be added in the selected department if there is a room for them in the department according to capacity of the department.

d- action which is used to list courses of a student and his grades in these courses.

e-action which is used to add evaluation for a specific instructor in a specific finished course

3- Instructor controller : assigned to one member in the group.

a- CRUD operation ( list , create , Edit , Delete ): use ajax call in delete and edit operations.

b- action that takes instructorid and lists courses he delivered.

c- action which allows instructor to enter degree for students. It takes instructorid , departmentid, courseid and returns a list of student and with each student a textbox to allow instructor to enter degree from 0-100 for students.

d- Department manager can see degrees of students in all subjects

- e- Department manager can see evaluation of all instructors who teaches in his department
- f- Manager can give permission to a student in his dept

4- Course controller : assigned to one member in the group.

- a- CRUD operation ( list , create , Edit , Delete ) : use ajax call in delete and edit operations. You are not allowed to delete course delivered to a student
- b- Action which is used to assign number of courses to a department. The view has a dropdown list of departments and also has a list of available courses with checkbox with each course.
- c- Action that is used to assign number of courses to instructor. The view has dropdown list of instructors and also has a list of available courses with checkbox with each course.
- d- action that is used to assign a specific instructor to a specific department in a specific course
  - the view will show 3 dropdown list, first one will select department and according to the selected department the second dropdown list will be populated with the courses of this department. And according to the selected course from the second dropdown list the third dropdown list will be populated with the instructor. There is a submit button that will submit data.

5- manage attendance of students and add reports that will shows the attendance degree of students assume that each student has 600 degree and deduction will be evaluated as follow if there is an absence permission from the instructor

- a- first time : with no deduction
- b- after 3 times : will deduct 5 per one
- c- after 3 times : will deduct 10 per one
- d- any one after will deduct 25 per one.

If there is no permission , deduction will be 25 per one

It's preferred to save this rules in DB table

- Show report for the student who attended in a specific date
- Show attendance of a student in a period of dates
- Show permissions of a student in period

The instructor can register a permission for a student in a specific data.

Using par code is bonus

6- Manage exam and evaluation ,

7- schedule system is bonus.

### Notes

- a- only you can use EF code first
- b- duration 2 weeks

- c- style using bootstrap
- d- any changes in business must done through me.
- e- No internet required so we can do all work in iti every day from 3:30 PM to 7:30 PM

Important dates

| Ser. | Dates            | Task                               | Participants                |
|------|------------------|------------------------------------|-----------------------------|
| 1    | 6/4/2017         | Group selections, and leaders      |                             |
| 2    | 8-10 / 4 / 2017  | ERD, layout selection              | All Members                 |
| 3    | 11-14 / 4 / 2017 | Code-first classes                 | All Members                 |
| 4    | 15-18 / 4 / 2017 | Main crud operations of each class | Every one take a controller |
| 5    | 19/4/2017        | First integration                  | All members                 |
| 6    | 20-24/4/2017     | Other required actions             | Every one take a controller |
| 7    | 25/4/2017        | Delivering and discussion          |                             |