



## **Lab 4**

### **Search and pagination using AJAX**

#### **Objectives:**

- Dealing with ajax, pagination, search and SQL joins
- Pagination is the process of dividing your content into pages and load each page at a time to improve performance
- If you have 50 users and you specify that each page will have 10 users, so this means that the first time you visit the website only the first 10 users will be displayed, then when asking for the second page the next 10 users will be loaded and so on thus improving the performance by avoiding loading all the users at once

#### **Requirements:**

- Showing the courses stored in the database paginated
- A button called 'Load more' should load the next page of the courses (meaning that when the website is loaded for the first time only 5 courses should appear, then when clicking load more the next 5 courses should appear and so on)
- The information that should appear is: course name, course description, department name and professor name
- An input text field with a button search used to search in the fields that are displayed in the previous point, meaning that the text entered should search in course name, course description, professor name, department name. (So you will need to join all your tables together)
- The search should be case insensitive



- The search results should also be paginated meaning that only 5 entries should appear and after clicking load more will load the next page of the search results
- The search should also ignore the spaces, so for example if a course is called database systems and I wrote 'databasesystems' it should be returned in the results. (Hint: use replace in SQL)
- The search should not search the exact word, it should search as a substring. Example: If a teacher is called ahmed mohammed then searching with 'ham' should return it,
- **ALL requests must be done using AJAX**

### **Database structure:**

- Department(department\_id, department\_name)
- Professor(professor\_id, professor\_name)
- Course (course\_id, course\_name, course\_description, department\_id, professor\_id)
- Each department can have many courses and each course belong to one department.
- Each professor can teach many courses and each course is taught by one professor.

### **Bonus:**

- Instead of the load more button, use page number, previous and next like the following image



- Instead of clicking on the search button, you should start searching automatically after typing 3 characters



## **Deliverables**

- HTML, CSS, Javascript, PHP files
- DDLs (Commands used to create the database and tables)