

Express.js Retake Exam - Video Tutorials

1. Exam rules:

- You have 6 hours **from 09:00 to 15:00**
- When you are ready, delete the **node_modules** folder, make sure all dependencies are listed in the **package.json** file and submit your archived project at: [SoftUni Judge // url here](#)
- You are provided with **HTML & CSS** resources, which you are allowed to **modify**
- Use **Express.js** as a back-end framework
- Use **MongoDB** as a database with **mongoose**
- You can use whatever **view engine** you like (Handlebars, EJS, Pug etc....)

2. Application Overview

Get familiar with the provided **HTML & CSS** and create an application for **video tutorials, courses** and **course lectures**.

3. Functional Requirements

The **Functionality Requirements** describe the functionality that the **Application** must support.

Guest (not logged in)

The **application** should provide **Guest** (not logged in) users with the functionality to **login, register** and **view** the **Home** page.

Users (logged in)

The **application** should provide **Users** (logged in) with the functionality to **view all the courses which are listed, course details page of all listed courses** and **they should be able to enroll in courses**. **Enrolled in** users should be able to see **lectures** in that course and the **Play Video** section. Courses can be **public** or **not**. Users can access **only public** courses.

Admin (logged in)

The **application** should provide **Admin** (logged in) with the functionality to **logout, create courses, edit courses, create lectures, delete lectures**.

The admin should be **added to the database when the application starts**. A **registration of a new admin** user should **not be possible**!

4. Database Models (15 pts)

The **Database** of the **Tutorials** application needs to support **3 entities**

User (5 pts)

- Username - string (required), unique
- Password - string (required)
- Enrolled Courses - a collection of Courses
- Roles - array with roles ("User", "Admin")

Course (5 pts)

- Title - string (required), unique
- Description - string (required), max length of 50 symbols,
- Image Url - string (required),
- Is Public - boolean, default - false,
- Lectures - a collection of Lectures,
- Users Enrolled - a collection of Users

Lecture (5 pts)

- Title - string (required)
- Video Url - string (required)
- Course - a single Course

Implement the entities with the **correct datatypes**.

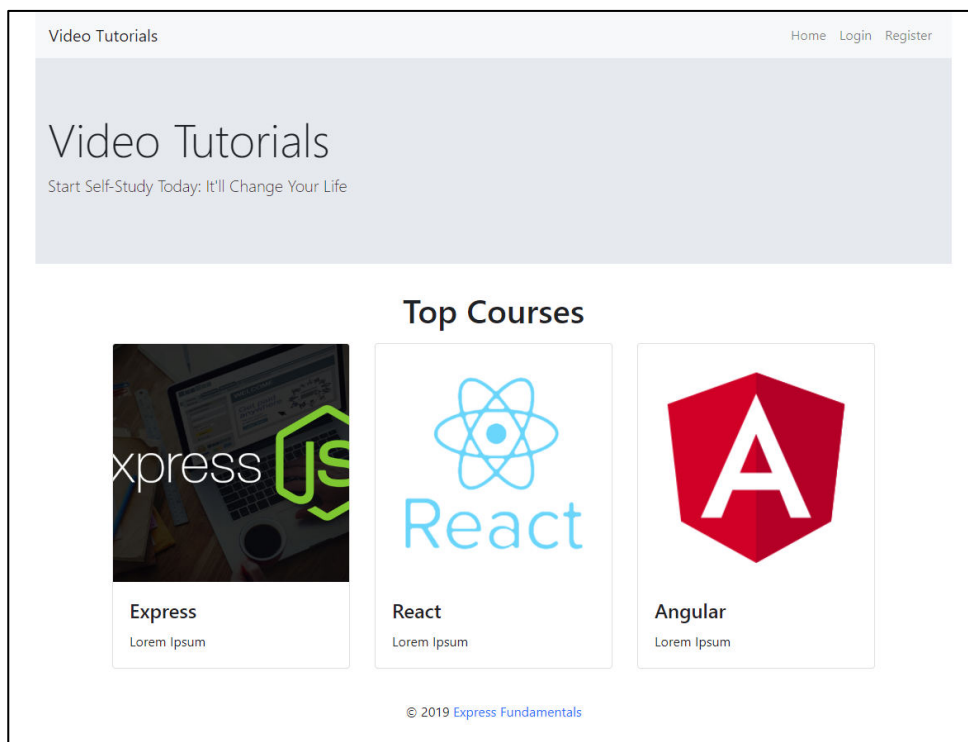
5. Application Pages (80 pts)

Guest Pages (10 pts)

These are the pages and functionalities, accessible by **Guests (logged out users)**.

Home Page (logged out user)

List the **top three (3) public courses ordered** by the **count** of enrolled in users in **descending** order.



Register Page (logged out user)

Register a user inside the database with **username** and **password**. Both **passwords** must **match**!

Tutorials Home Login Register

Username

Username

Password

Password

Repeat Password

Password

Register

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Login Page (logged out user)

Tutorials Home Login Register

Username

Username

Password

Password

Login

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Admin Pages (40 pts)

These are the **pages** and **functionalities**, accessible by **Admin**

Home Page (logged in Admin)

This is the **home** admin page. An admin can **create**, **edit courses** and **create the lectures** in them.

Video Tutorials Home Welcome, Admin Logout

Create Course

Choose Course

Angular	Edit Course	Add lectures	Lectures in course 3
React	Edit Course	Add lectures	Lectures in course 2
Express	Edit Course	Add lectures	Lectures in course 3
Non-Public	Edit Course	Add lectures	Lectures in course 0
Symfony	Edit Course	Add lectures	Lectures in course 3
Spring MVC	Edit Course	Add lectures	Lectures in course 3
ASP.NET	Edit Course	Add lectures	Lectures in course 1

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List All Courses (logged in Admin) (10 pts)

List **all** courses from the database and the **count** of lectures in them.

Angular	Edit Course	Add lectures	Lectures in course 5
Express	Edit Course	Add lectures	Lectures in course 2

If there are no courses in the database yet, display "**No courses in database. Please create one!**"

Tutorials

Home Welcome, Admin Logout

Add Course

No courses in database. Please create one!

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Create Course (logged in Admin) (5 pts)

Enter course **title**, **description**, **image URL** and choose if the course will be **public** or not. You will receive the value of the checkbox as a string "**on**" if it's checked or **undefined** if it's not. You have to convert the received value as Boolean **true** or **false** and save the course in the database.

Video Tutorials

Home Welcome, Admin Logout

Create Course

Course Title

Course name

Course Description

Description

Image url

Image Url

☐ Public

Submit

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Edit Course (logged in Admin) (10 pts)

All form fields should be **filled** with the corresponding information of the selected course.

Video Tutorials

Home Welcome, Admin Logout

Edit Course

Course Title

Course Description

Image url

☒ Public

Submit

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Lecture Panel (logged in Admin) (15 pts)

This view should include the **create form** with the **course title** and **all** of the **lectures** in that course with their **count**.

Tutorials

Home Welcome, Admin Logout

Add lecture to course Express

Lecture Title

Video Url

Submit

There are 3 lectures in this course

Conrollers	Delete
Routing	Delete
Achitecture	Delete

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Create Lecture (logged in Admin) (5 pts)

Add lecture to course Express

Lecture Title

Video Url

Submit

List Course Lectures (logged in Admin) (5 pts)

Below the **Add lecture** form, you should be able to see all **lectures** in the course. After adding a lecture, it should be instantly listed below the form.

There are **3** lectures in this course

Conrollers	Delete
Routing	Delete
Achitecture	Delete

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Delete Lecture (logged in Admin) (5 pts)

Upon deleting a lecture, you should be **redirected to the same page** only this time one lecture less should be shown.

There are 4 lectures in this course

Conrollers	Delete
Routing	Delete
Achitecture	Delete
Delete Me	Delete

After deletion:

There are **3** lectures in this course

Conrollers	Delete
Routing	Delete
Achitecture	Delete

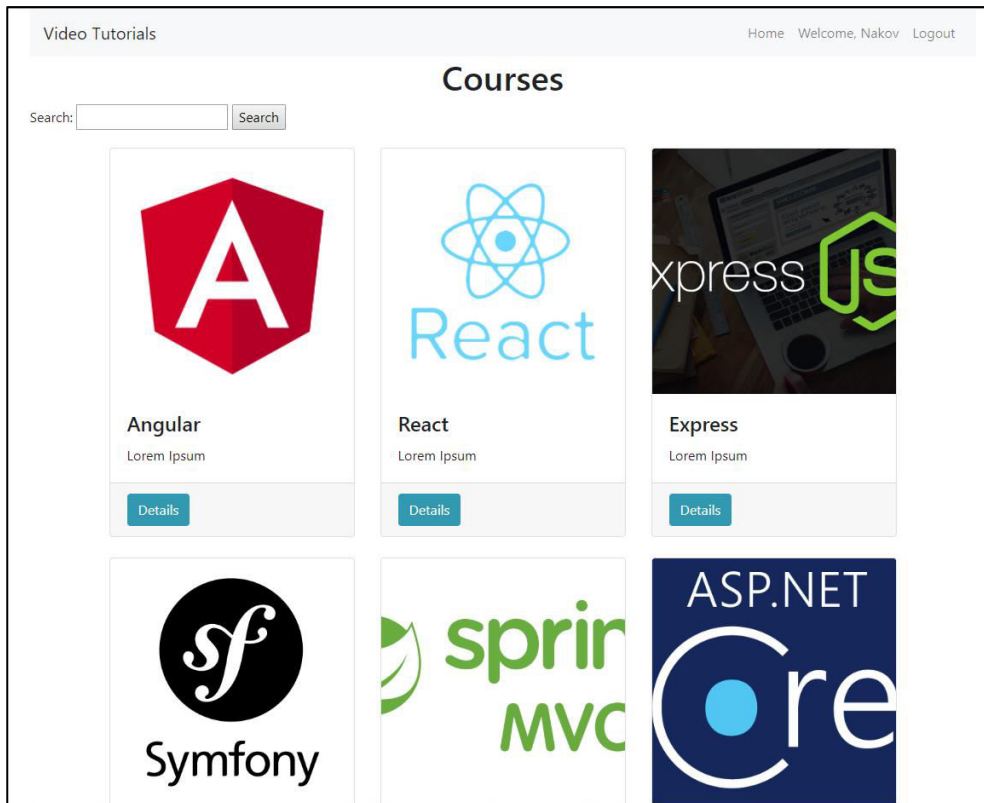
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User Pages (30 pts)

These are the **templates** and **functionalities**, accessible by **Users** (logged in users).

Home Page (logged in user) (5 pts)

List **all public** courses with a button **Details** which leads to a **course details page**.

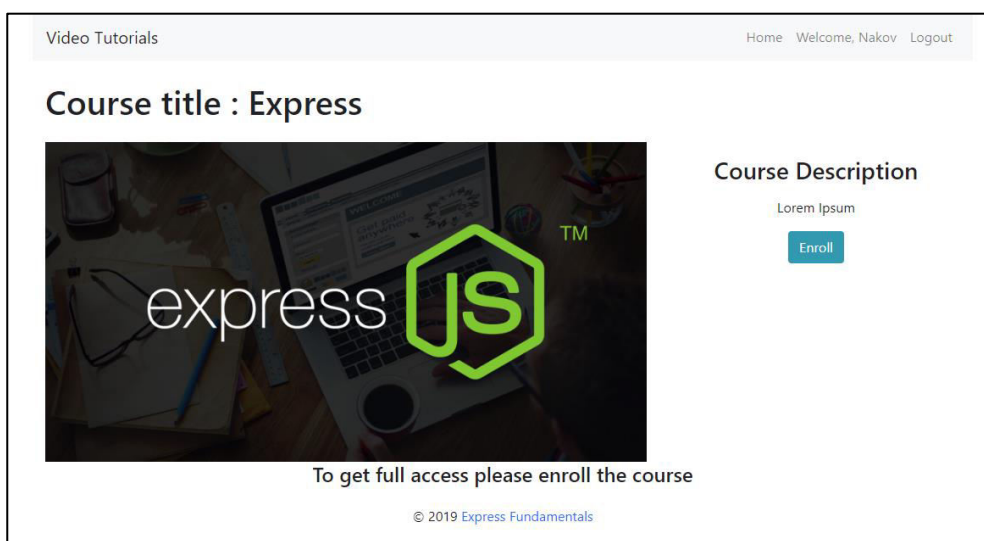


Logged in Details Page (logged in user) (10 pts)

In the Details of a **public** course section, you should load course **name** and **description** and the **list** of lectures **if** the user is enrolled in the course.

Not Enrolled in Course (logged in user) (5 pts)

If the user is **not enrolled** in the course you should display **Enroll button**. In this scenario the **lectures list** should be **hidden** and the following message: "**To get full access please enroll the course**" should be displayed.




Enrolled in Course (logged in user) (5 pts)

After the user has enrolled in the course, the **Enroll button** should be **hidden** and all lectures in that course should be **listed** with a **Play** button which leads to a **Play video** page

Video Tutorials
Home Welcome, Nakov Logout

Course title : Express



Course Description

Lorem Ipsum

enrolled

Lectures List

Conrollers	Play
Routing	Play
Achitecture	Play

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Logged in Play video (logged in user) (10 pts)

You should display the current lecture **video** and the lecture **title** in **Now Playing: {{title}}**. This page is accessible only for **public** courses and users who are **enrolled** in that course. Below it you should **list all the lectures** in that course with the **Play** button.

Tutorials

Now playing :

Routing



Lectures List

Conrollers	Play
Routing	Play
Achitecture	Play

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6. Security Requirements (5 pts)

The **Security Requirements** are mainly **access** requirements. Configurations about which users can access specific functionalities and pages.

- **Guest** (not logged in) users can access **Home** page and functionality.
- **Guest** (not logged in) users can access **Login** page and functionality.
- **Guest** (not logged in) users can access **Register** page and functionality.
- **Users** (logged in) can access **All course** page and functionality.
- **Users** (logged in) can access **Course Details** page and functionality.
- **Users** (logged in and enrolled in the course) can access **Play Video** page and functionality.
- **Users** (logged in) can access **Logout** functionality.
- **Admins** (logged in) can access **Course Panel (Admin home page)**.
- **Admins** (logged in) can access **Create Course** page and functionality.
- **Admins** (logged in) can access **Edit Course** page and functionality.
- **Admins** (logged in) can access the **Lecture Panel** page and functionality.
- **Admins** (logged in) can access the **Logout** page and functionality.

7. * Bonus (10 pts)

Search in courses. Filter only the **courses** names that **include the searched string (case-insensitive)**.

