# Exercises: Identity

## Learning System

Create a web application that helps organizing and keep information about **students** and **courses**.

#### Models

* **Students** – have username, name, email, password and birthdate, list of courses
* **Courses** – have name, description, trainer (registered user with role trainer), start date, end date, list of students
* **Articles** – have title, content, publish date and author

#### Roles

* **Guest** (unregistered users) – can view all courses and their details
* **Student** – That is the regular **registered user**. Can sign up to any course of their choice.
* **Trainer** – can assesses students in a course that he is set as trainer
* **Blog author** – can publish articles in the blog
* **Administrator** – can create new courses or edit existing ones and set roles to all users

Note that a user could be more than one role. For example, an administrator could also be a trainer.

#### Areas

* **Admin** – accessible only by administrators where they can create new courses or set roles to users
* **Blog** – accessible by all registered users in any role. Blog authors can publish new articles.

#### Features

* **Home page** should show a list of **all courses**
* Users can **register** by providing **username**, **name, email, password and birthdate** or alternatively by creating account with their **Facebook** or **Google** profile.
* **Registered user**s can **sign up** to any course
* **Registered users** can **sign up/out** of course before its start date
* **Registered users** can **read all articles** from the blog
* Each user should have **Profile page**. The profile page should contain **list of the courses** the user has signed up and **grade** of that course.
* **Registered users** can **edit** their profile
* **Trainer** of a course can **place grades** to each student signed up to it. **Grades** can be **A, B, C, D, E** or **F** (from highest to lowest)
* **Trainer** can assess a student for a course **only when the course is over**.
* **Blog authors** can **publish articles** in the blog. Once published the article **cannot** be modified.

Create at least 2 users in each role and try whether all features work as expected. You are free to **choose a design** of your taste.

## Search

In the Learning System add option to **search courses** and **users** by **part of their name**.

In the blog part add option to **retrieve all articles** that contain provided **keyword** in their **title** or **content**.

## \*\* Exam

Each course finishes with **exam.** At the **last day** of the course each **student** enrolled in a course should have option to **upload** a **.zip** file containing his solution of the exam. After that day, the **trainer** of the course should be able to **download all** student’s submissions to assess them. The size of a submission **.zip file** must be **no** bigger than **2 megabytes.**

## \*\* Issue Certificate

If a student pass a course with grade **A**, **B** or **C** he should be able to **download a PDF certificate for that course**. The certificate must **contain** at least:

* The **name** of the course
* **Start** and **end date** of the course
* Student **name**
* Student **grade**
* Trainer **name**
* **Date of issue** of the certificate