



Lecturer

Rokas Slaboševičius

Last exam:)

Data



Exam

Person registration system

User information:

- Username
- Password
- Salt
- Role
- Person Information Relationship

Person information:

- Name
- Last name
- Gender
- Birthday
- Personal code
- Telephone number
- Email
- Profile photo
- Place of residence

Place of residence:

- City
- Street
- House number
- Apartment number



Exam

Workflow: The user must be able to register.

After registration, a User is created with the default role 'User'.

A user must be able to edit information about him/herself with ALL fields required (Person information), a user must not be able to edit information about more than one person.

There must be a different endpoint to update EACH of the Models properties, e.g. Name, ID number, phone number, city (cannot be updated to a blank field or whitespace)

When registering a person, a profile picture must be uploaded and the size must be reduced to 200x200 (if the picture is too small it will be stretched to 200x200).

It shall be possible to retrieve all information about the uploaded person by his/her ID (photo returned as a downloadable image).

The user should not be able to update information that is not his own, for the sake of convenience, let's say that with every request "from the frontend" will come a User ID.

There must also be an 'Admin' role, which will be set via the database and will have an endpoint to delete users by ID (deleting a user also deletes the person's info) For Admin show only ID, Username; Person's info: ID, Name, LastName

Offline only registration and login must be possible

Authentication and Authorisation is done with Json Web Tokens.

Mssql database is used.

The Entity Framework is used.



Exam

User Information:

Username: Must be unique and be between 8-20 characters.

Password: Must meet complexity requirements (e.g., minimum 12 characters, including at least two uppercase letters, two lowercase letters, two numbers, and two special characters).

Salt:

Role: Defaults to 'User' upon registration; must be assigned manually for other roles.

Person Information Relationship: One-to-Many relationship with Person Information.

Person Information:

Name: Must follow specific locale rules (e.g., no special characters, numbers, and length between 2-50 characters).

Last Name: Same restrictions as Name.

Gender

Birthday: All necessary validation

Personal Identification Code: Unique identifier, following a specific pattern (e.g., a combination of letters and digits that must pass a checksum validation).

Telephone Number: Must follow a country-specific format and pass a validation algorithm (e.g., E.164 format).

Email: Must be unique, follow standard email format validation, and include a domain verification step.

Profile Photo: Image file, automatically resized to 200x200 pixels using a specific resizing library or technique. (Limit the size of images)

Place of Residence Relationship: One-to-one relationship with Place of Residence.

Place of Residence:

City: Cannot contain numbers or special characters and must pass a locale-specific name validation.

Street: Must contain at least one space and pass a specific pattern check.

House Number: Alphanumeric and must pass a regex validation (e.g., "[0-9]+[A-Za-z]?\$").

Apartment Number: Optional, can be left blank but if provided must pass a specific format check.



Exam

Assessment:

Working programme - 5 points

Interface and class registrations used - 1 point

Working migrations - 1 point

Code easy to understand - 1 point

Code following the single-responsibility principle - 1

Unit tests - 1 point