

# Test assignment 17/06/2022

## Prerequisites:

1. It is allowed to use online resources. **Framework and libraries usage is allowed** if the license rules allow to do so
2. The system development technologies can be freely chosen based on your experience but based on the interview, the recommendation would be to develop on **ASP.NET MVC**
3. The time to develop the program is 4 hours (you may **not be able to finish** all of the requirements but it is important to prioritize and finish the **key features!**)

## Functional requirements:

1. Create login form with fields **"Username"** and **"Password"**
  - a. There must be an error notification if any of the parameters are incorrect
  - b. There must be 2 users with different roles - **admin, user**
  - c. Users can be added to the database using a registration functionality or database seeding scripts
  - d. If the user has submitted a valid username and password then the system must redirect to the view from point 2.
2. Product management:
  - a. A HTML table with columns **"Item name", "Quantity", "Price"** and data loaded from database table **"product"** (see point 3)
  - b. The user with "admin" role must have full CRUD functionality. The input fields in forms must have validation.
  - c. The user with "user" role must only be able to view the records
  - d. A extra column **"Total price with VAT"** which is calculated in backend using formula:  $(\text{Item amount} * \text{Price per item}) * (1 + \text{VAT})$ , where VAT value is retrieved from a configuration file
  - e. A **unit test** must be created for method which does point 2.d calculation;
3. A Table called **"product"** must be created in the database using **migration** scripts and data must be inserted using **seeding** scripts. For example:

#	title	quantity	price
1	HDD 1TB	55	74.09
2	HDD SSD 512GB	102	190.99
3	RAM DDR4 16GB	47	80.32
...	...	...	..

4. Database requires the storage of data history, for example table "product\_audit" which stores data about the changes - what was changed by which user and when the data was changed.
  - a. Data is not required to be available in a UI but "admin" user must have access to them via **HTTP API (JSON)** with the ability to filter the data based on the data modification date (i.e. with &from and &to GET parametrs by the specified date)
5. The **source code** and **deployment instruction** (i.e. readme.md how to deploy and run program) should be posted in public code repository, for example [github.com](https://github.com) or anywhere else