Internet Technologies – PROJECT (max 50 points)

Use of AI for this assignment: **ALLOWED**

Select ONE of the two available variants of the final project. The indicated score is the maximum possible number of points, in case of non-fulfillment/partial fulfillment of the requirements the grade will be lowered.

**Limitations:**

No "I did it for work" projects. No copying of existing tutorials

## Option A

Build an application using any frontend and backend technologies. The application should meet the following requirements (requirements specified for each level, to receive a score you must also meet all requirements for lower levels):

### Level 1 (10 points):

* At least 3 connected database tables (including one many-to-many relationship with at least one additional column in addition to foreign keys in the connecting table)
* At least 3 different types of columns
* At least 2 columns in each table (in addition to the primary key)

Functionalities:

* Adding, updating, deleting records to the database
* Displaying a list of all records for each table (only the most important columns)
* Displaying detailed views (all columns + records connected by relationships)
* Data validation on the client and server side

Constraints:

* SQLite, MySQL or MongoDB as a database, the project must contain easy-to-follow instructions for updating database connection information

The solution must include:

* Frontend and backend application code
* Database creation script
* Database script for creating sample data
* Any compilation scripts etc. used to build the application

### Level 2 (20 points):

Additional functionalities:

* Registration and login (including necessary database tables)
* Different functionalities depending on user status (logged in/guest) - e.g. only logged in users can modify data
* Pagination of displayed lists

### Level 3 (20 points):

Additional requirements:

* The frontend application should be built as a Single Page Application

Additional functionalities:

* At least 3 user roles (e.g. logged in, guest, administrator) with different available functionalities
* Introduction of resource-level permissions (e.g. a customer can only view their own orders, a manager can view and update only employee data from your department)
* Internationalization (at least 2 languages)