

# Industrial Informatics Semester Project

## Technical University of Cluj-Napoca

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# Motivation

- Develop a **desktop** application implemented using **Windows Forms** technology.
- A Windows Form application is an **Event-Driven application**, supported by Microsoft's **.NET Framework**.
- The application will spend most of its time simply waiting for the user to interact with.



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# Development Tools

- IDE: **Visual Studio**
- Database implementation: **SQL Server/Service-based Database**
- Design of the class diagram: **StarUML**



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# Sharing Environments

- Each team member must always be aware of the application's development progress.
- Consequently, our team will use the following ways of communication:





# Code Branches

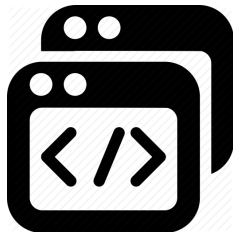
- The code sharing environments gives the programmers the possibility of dividing their code into specific sections:
  - Frontend branch
  - Backend branch
- Use of Design Patterns and Clean Code Principles

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# Front-end Module

- **Front-end module:** contains the elements which will determine **the man-machine interaction**
- **Examples:** Button, TextBox, MenuStrip, PictureBox etc.
- **No. of forms:** Login/Sign Up, Home Page, User Page, First Test, Second Test, Results (Interpretation), List of Universities
- Styling and design principles:
  - **Visibility of system status**
  - **User control and freedom**
  - **Flexibility and efficiency of use**
  - **Aesthetic and minimalist design**



# Back-end Module

- **Back-end module:** handles the **business logic** as well as **the data storage** of the application
- Contains the database, which will consist of the following tables:
  - **Users Table**
  - **Two tables, each with questions from the tests**
  - **Faculties Table**
  - **Results table**

