Course title: Practicum - User Interface
Course code:
ECTS credits: 4
Requirements: None
Basic information
Level of studies: Undergraduate applied studies
Year of study: 2
Trimester: 3
Goal: Enabling students to apply advanced user-interface implementation principles in both web and desktop programming environment.
Outcome: Students should develop sophisticated and modular user-interface elements using MVVM design patterns in both desktop and web client applications.
Contents of the course
Theoretical instruction
1. User interfaces, history and types of user interface
2. Patterns for user interface development
3. MVVM software pattern
4. MVVM in web development - VueJS
5. VueJS - components and model binding
6. VueJS - working with external API
7. MVVM in desktop development - WPF
8. WPF - components and model binding
9. WPF - data management and API
Practical instruction (Problem solving sessions/Lab work/Practical training)
1. Current state of user interface development overview
2. MVVM examples
3. VueJS - components and component lifecycle
4. VueJS - component data management
5. VueJS - working with forms and external API
6. WPF - components and XAML
7. WPF - component data management
8. WPF - component styling
9. WPF - working with forms and external API

Textbooks and References
1. Sorensen, E., & Mikailesc, M. (2010). Model-view-ViewModel (MVVM) design pattern using Windows
Presentation Foundation (WPF) technology. MegaByte Journal, 9(4), 1-19.
2. Filipova, O. (2016). Learning Vue. js 2. Packt Publishing Ltd.
Number of active classes (weekly)
Lectures: 0
Practical classes: 4
Other types of classes: 0
Grading (maximum number of points: 100)
Pre-exam obligations: Points
Activities during lectures:
Activities on practical exercises: 0
Seminary work: 50
Colloquium:
Final exam: Points
Written exam: 50
Oral exam:
Lecturer
Nenad Teofilović, MSc
Associate
Luka Lukić