



Academia de Studii Economice
Departamentul de Informatică și Cibernetică Economică

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Contest Topics for Professor
Position 26, 2021-2022, semester 1

Disciplines: Windows Applications Programming, Multimedia.

Windows Applications Programming

1. .NET Platform. Comparison between C++ and C#, between Java and C#.
2. Windows applications, general concepts. Interface events management. Concepts like observer and event delegation.
3. Windows Forms. Basic visual controls. Mouse and keyboard events management.
4. Menus, visual controls, mechanisms for validation of input data. Managing controls events.
5. Working with files in Windows applications. Binary files, text and XML. Data serialization.
6. MDI applications.
7. Complex visual controls like ListView and TreeView.
8. Using 2D Graphics in Windows applications.
9. Using databases. ADO.NET
10. Accessing databases from Windows applications using ADO.NET.
11. User controls.
12. Accessing operating system resources. Working with dynamic libraries. Internationalization of interfaces.
13. Printing documents. Drag & Drop. Using the clipboard.
14. Data Binding

Bibliography:

1. Ion SMEUREANU, Marian DARDALA, Adriana REVEIU, Visual C# .NET, CISON, Bucuresti, 2011, România
2. K. M. Hussain, Programming .NET with C#, Rox Publishing House, 2001
3. Jesse Liberty, Programming C# 2nd Edition, O'Reilly, 2002
4. Tom Archer, Inside C#, Microsoft Press, 2001



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Multimedia

1. Multimedia - evolution, general concepts
2. Categories of multimedia applications; Hardware conditions for multimedia; Software conditions for multimedia
3. Developing multimedia applications using HTML5, CSS3, JavaScript
4. Image; Color models; Raster image format; Drawing geometric figures; Transformations
5. Image processing; Storage formats and compression algorithms
6. Image; Vectorial image format;
7. Animation
8. Sound; Sound digitization; Sound representation;
9. Implementing applications using sound; Audio formats; Sound compression
10. Video; Video in web context;
11. Video formats; Video compression
12. Integration of multimedia elements

Bibliography:

1. Dârdală, M., Smeureanu, I., Reveiu, A., Tehnologii multimedia, ASE, Bucuresti, 2008, România
2. Smeureanu, I., Drulă G., Multimedia - concepte și practică, CISON, Bucuresti, 1997, România
3. Vaughan, T., Multimedia – ghid practic, Teora, Bucuresti, 2004, România
4. Cotfas L.-A., Multimedia, Editura Universitară, București, 2021, România

Head of Department,

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