Design and Implementation of Distributed Applications 2020-2021

1st Year, 1st Semester

MEIC - Alameda Campus
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Lab. 1 - Introduction to the .NET Framework

Support material:

- OverrideNewTest.cs (this program allows you to test the redefinition of method in C#)
- Slides (pdf)
- References:
  - A Tour of C# - basic online documentation
  - Code Project - how to do ... in .NET

A - Introduction to the .NET Framework

A.1 - Hello World

a) Implement a "Hello World" application as a Console Application:

- Open VisualStudio.NET.
- Create a new C# console app (.Net Core) project.
- Use the `WriteLine` method from class `Console`.

b) Implement a similar app (in a different project) as a Windows app:

- Create a new project, a Windows Desktop "Windows Forms App (.Net Core)".
- Use the `Show` method from class `System.Windows.Forms.MessageBox`.

A.2 - Name List

a) Implement an app that manages a list of names.

- Create a new C# Windows Application project.
- Add a new class file (.cs)
- Define the `IListaNomes` interface, which should include prototypes for:
  - Adding a new name to the list.
  - Returning all names in the list, as a string.
  - Erasing the list's content.
- Create a class that implements `IListaNomes` and create an instance of it in your Windows Forms application (use the `ArrayList` class to store the names).
- Build a Windows Form that uses all features provided by the `IListaNomes` interface: textboxes to add new names and display the list, buttons to add, display and clear the list. The textbox to display the list should have the Multiline property enabled and the method that returns all the names in the list should separate the names with "\r\n" in order to place each name in a separate line.

b) Place breakpoints in each of the class' methods and check that each is called and executed correctly.