

A decorative network diagram in the top-left corner, featuring a complex web of interconnected nodes and lines. Some nodes are highlighted with blue circles, and others with blue dots. The lines are thin and gray, creating a mesh-like structure.

Practice

Windows Programming Course

A decorative network diagram in the bottom-right corner, similar to the one in the top-left. It shows a network of nodes and lines, with some nodes highlighted in blue. The overall style is clean and modern, with a focus on connectivity and structure.

Practice 01

Objective: Practice WPF controls.

Steps:

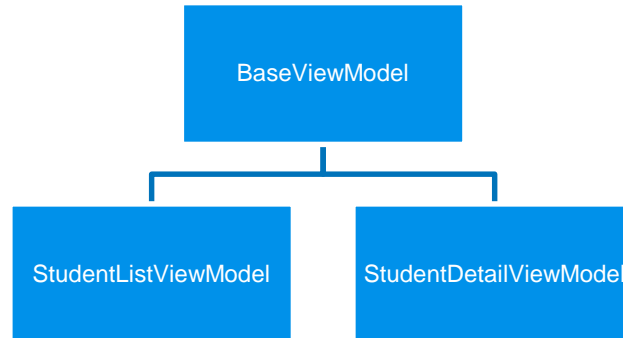
- ① Install tools: Visual Studio, Git.
- ① Read and Clarify [FinalExercise SIM tool.pdf](#)
- ① Follow the mockup sections, Implement layout for 2 windows Students List and Student Creation/Modification by using StackPanel and Grid layout controls in the lesson 08 WPF and basic controls such as Textbox, Button, DataGrid/ListView, Menu.

Practice 02

Objective: Implement VM for windows.

Steps:

- ① Create VM for 2 windows Students List and Student Creation/Modification.
- ② Implement notification by deriving the INotifyPropertyChanged interface for both VMs. In order to avoid code duplication, create a base class for 2 VMs:



Practice 02 (cont.)

Steps:

- ① Hook up VM and View and bind control's properties to VM's Properties. For DataGrid/ListView, bind ItemSource of the control to an ObservableCollection in VM.
- ② Create RelayCommand (Copy code from slide Sample RelayCommand in the lesson 10).
- ③ Create/Implement commands in VM for buttons: Search, Reset, Save, Cancel, menu "Create Student", menu "Delete Student".
- ④ Implement validation for the dialog Student Creation/Modification by deriving the IDataErrorInfo interface.

Practice 03

Objective: Enrich the GUI by applying WPF Themes.

Steps:

- ◎ Search key word “WPF Theme” and download a theme.
- ◎ Apply it to the application.

Practice 04

Objective: Implement Web Service.

Steps:

- ① Create a Web Service (ASP.NET Web API)
- ② Create models: Student, Class, Subject, Transcript (Ref to section Database in FinalExercise_SIM_tool_1.0.doc)
- ③ Create Service: StudentService (Ref to Lesson 12) with following methods: AddStudent, UpdateStudent, SearchStudent, RemoveStudent.
- ④ Create Controller: StudentController with following methods: AddStudent, UpdateStudent, SearchStudent, RemoveStudent. In each method, invoke corresponding methods of StudentService.

Practice 05 (07/11/2020)

Objective: Implement Entity Framework.

Steps:

- ◎ Implement StudentMngContext
- ◎ Create DBInitializer for StudentMngContext
- ◎ Implement CRUD methods using LINQ