

Course code: **WP/START**

Course title: **Windows Phone programming – a quick start**

Days: 3

Description:

Course intended for:

The training is intended for programmers, who want to get basic knowledge of the c# language and the Windows Phone platform and to get familiar with some more complex issues (e.g. working with Web API).

Course objective:

The training objective is to get the participants familiar with the Windows Phone platform and the requirements defined by Microsoft for development of applications for devices with operating systems of the corporation. The training curriculum was developed on a solid theoretical basis and its practical application. Three complete applications will be developed during the training.

During the three-day course, the participants will be introduced to the C# language and the Microsoft Visual Studio 2013 programming environment, the popular patterns used on the Windows Phone platform and the process of publication in the Windows Store.

Course strengths:

The program encompasses issues of development of mobile applications for the Windows Phone platform in C# language. The topics discussed will include those, which are used in many applications and may turn out to be difficult to learn individually. The curriculum is constantly updated to include always the most recent version of Windows Phone SDK.

Requirements:

The training participants are required to have the object-oriented programming skills. Familiarity with C language is recommended (but not required).

Course parameters:

3*8 hours (3*7 net hours) lectures and workshops (80% of the training consists of workshops).

During the workshops, the participants will develop applications using the most frequently

encountered methodologies and patterns in the popular Windows Phone applications.

Course curriculum:

1. The basics and introduction to Windows Phone SDK
 - I. Development of Windows Phone
 - II. Software and hardware requirements
 - III. Programming tools
 - i. Microsoft Visual Studio
 - ii. Installation Windows Phone SDK
 - iii. Windows Phone Simulator
 - iv. Devices connected with the Windows Phone system
 - IV. Discussing of Windows Phone SDK
 - V. Discussing of Windows Phone guideline
 - i. Best practices
 - ii. Modern design
 - iii. Exemplary realizations
 - VI. Programming in c# language
 - i. Language syntax
 - ii. Data types
 - iii. Asynchronous programming (async, await)
 - iv. Behavior of the garbage collector in Windows Phone SDK
 - v. Use of lists and dictionaries
 - vi. Development of strings, comparison of write lines etc.

- vii. Development of numerical objects
- viii. Use of INotifyPropertyChanged
- ix. Development of getters and setters
- x. The MVVM pattern
- xi. Shared libraries

2. Views and navigation between views of the Windows Phone

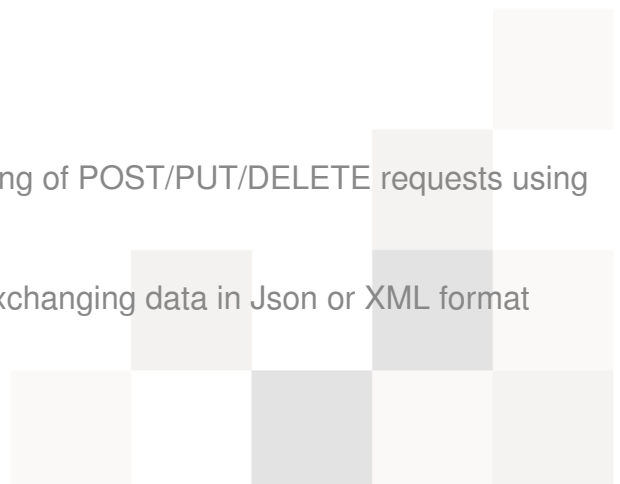
- I. XAML language programming
- II. Visual editor
- III. Use of the MVVM pattern and data binding
- IV. Object grouping
- V. Form development
- VI. Object listing
- VII. Use of MVVM pattern and data binding
- VIII. Navigation between many views
- IX. Discussing of various types of views
- X. Use of the progress indicator

3. The local file system

- I. Data storage using Isolated storage
- II. Installation, implementation and work with sqlite3 database
- III. linq to sqlite3

4. Web API and Web Service software

- I. Asynchronous data collection. Sending of POST/PUT/DELETE requests using HttpClient
- II. Working with Web API type REST exchanging data in Json or XML format



III. Working with Web Service type SOAP

5. Publication of mobile applications in Windows Store

- I. Preparation of XAP file for publication
- II. Preparation of the application description
- III. Reporting of application for verification

