

# Introduction into Visual Basic for Applications (VBA)

Course code: MSVBA1

In this course, you get the basic skills to develop applications using Visual Basic for Applications (VBA), which is used primarily for the development of macros in MS Office. You will learn how to use basic construction of Visual Basic, define variables, use data types, functions and procedures, and collections, loops, you learn to handle runtime errors application debug program, use their own forms and also understand the basics of object-oriented programming. To attend the course requires basic knowledge of algorithms and programming course at PRG.

## What we teach you:

- Using variables and data types.
- Create functions and procedures
- Use basic language constructs such as conditions and cycles
- Debug application
- Capture runtime errors
- Create your own forms and use controls
- Much more practical and useful techniques that you use in your applications

## Required skills:

- Knowledge of algorithms and programming at the level of the course PRG.

## Teaching methods:

- Professional explanation with practical samples and examples.

## Teaching materials:

- Powerpoint handouts and module printouts.

## Course syllabus:

Introduction to create applications using Microsoft Visual Basic

- Properties of Microsoft Visual Basic
- Working in a development environment

Working with program code

- Modules
- Using the editor window
- Comments
- Environment settings
- Automatic code completion
- Dialogs

Variables and Procedures

- Declaring variables
- Data types
- Converting Data Types
- Constants
- Arrays

Procedures and Functions

- Procedures and Functions
- Parameters of functions and procedures
- Optional parameters
- value parameters and reference parameters
- Featured built-in functions

Flow control program

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- Logical and comparison operators
- If..Then
- Select..Case
- Do..Loop
- For..Next
- Ending loops

## Working with collections

- What's Collection
- Create a collection
- Passage through the collection cycle For..Next
- Passage through the collection cycle For..Each
- Samples collections

## Debugging

- Types of errors
- Watch window
- Immediate window
- Call Stack
- Locals window
- Step through the program

## Catching errors

- Run-time error
- Err object
- Concatenation errors
- Inline Error Handling

## Basics of creating custom forms

- Custom forms
- Basic usage controls

## Object-oriented programming

- Introduction to Object
- Use the properties, methods and events
- Create and use custom classes
- Create and use custom properties
- Creating and using custom events

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