Comarch Training Center
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COMARCH
Szkolenia

VBA in MS Excel – Beginners Level

Basics of computer programming

Training objectives

This training course is to empower participants' expertise while doing their job, thus:

- Learn the basics principles of the craft and art of programming
- Acquire the ability to read and understand the code
- Understand the basic constructions used in programming
- Learn the basic types of VBA language errors and how to avoid them
- Obtain a set of ready-to-use procedures to apply in daily work

Skills

After this training course, the participant will automate:

- data processing and formatting in spreadsheets,
- checking the correctness of data and data calculations/processing (such as user errors and MS Excel errors),
- data corrections (such as the most common user errors).

Profile

This training course is intended for individuals who, among other things:

- work on large amount of data in spreadsheets,
- perform numerous repetitive operations (e.g., copy data or correct errors),
- create repetitive reports and calculations based on changing data.

It is indented, inter alia, for analysts, accountants, warehousemen, production support/organization employees.

Preparation

Required knowledge: very good practical knowledge of MS Excel (participants should use intensively MS Excel in daily work).

Syllabus

1. Start of the training course – organizational matters
2. Macros – task automation in worksheets
   2.1. Registering and running macros
      2.1.1. How to run macro-operated card
      2.1.2. How to set security level

- 2.1.3. How to prepare environment for macros
- 2.1.4. How to register macro
- 2.1.5. How to run macro
- 2.1.6. How to save worksheet with macros
- 2.1.7. Workshops

2.2. Buttons for running macros in a worksheet

- 2.2.1. How to add a run macro button to worksheet
- 2.2.2. Workshops

3. VBA code management
   - 3.1. VBA editor window structure
   - 3.2. Archiving and transferring VBA code – using VBA modules
   - 3.3. Navigation in VBA code
4. [optionally] Adding macros to MS Excel interface
   - 4.1. Toolbars
     - 4.1.1. How to activate worksheet with individual macros
     - 4.1.2. How to add a run macro button to the quick access toolbar
     - 4.1.3. How to modify the ribbon – add a sheet with user's macros
     - 4.1.4. Workshops
5. Editing VBA code
   - 5.1. Modifying VBA code
   - 5.2. Changing the basic settings of VBA editor
   - 5.3. Colors in VBA editor
6. Introduction to programming
   - 6.1. Procedures
   - 6.2. Variables – declaring variables correctly and preventing non-declaration errors
   - 6.3. VBA data types
   - 6.4. Operators
   - 6.5. Exercises
7. Program testing
   - 7.1. Stepwise startup
   - 7.2. Quick preview of processing results
   - 7.3. Sensors – tracking variable values
8. Text processing
   - 8.1. Joining text strings (concatenation)
     - 8.1.1. How to join text strings
     - 8.1.2. How to break a line of text in code
     - 8.1.3. How to break an output line of text (e.g., in a message window)
     - 8.1.4. How to add special characters (e.g., quotation marks) to the output text
     - 8.1.5. Workshops
   - 8.2. Text string processing functions
     - 8.2.1. How to check the length of a supplied text string ("Len" function)
     - 8.2.2. How to return the start of a supplied text string ("Left" function)
     - 8.2.3. How to return the end of a supplied text string ("Right" function)
     - 8.2.4. How to return the middle of a supplied text string ("Mid" function)
     - 8.2.5. How to remove duplicate spaces at the start and end of a text string ("Trim" function)
     - 8.2.6. How to convert text string to upper-case ("Ucase" function)
     - 8.2.7. How to convert text string to lower-case ("Lcase" function)
     - 8.2.8. How to find a substring in a string ("InStr" function)

- 8.2.9. How to check if expression is a number ("IsNumeric" function) + VBA function errors
- 8.2.10. Workshops

9. Data processing control
   - 9.1. Conditional statement and building conditions correctly
     - 9.1.1. How to execute only the true condition with one statement only (one-line syntax)
     - 9.1.2. How to execute only the true condition with multiple statements
     - 9.1.3. How to use complex condition
     - 9.1.4. How to execute both the true and false conditions
     - 9.1.5. How to check multiple criteria sequentially
     - 9.1.6. Workshops
   - 9.2. “For” loop with a counter + workshops
   - 9.3. Loop that processes collections of objects (“For Each”) + workshops
   - 9.4. Loop with exit condition (“Do ... Loop”) + workshops
   - 9.5. Stop/exit statement (“Exit”)
10. VBA in spreadsheet
    - 10.1. Objects in spreadsheets
    - 10.2. Properties and methods
    - 10.3. Object hierarchy in MS Excel
    - 10.4. Basic object syntax
    - 10.5. Classes and collections
11. Operations on cells and cell ranges
    - 11.1. Operations on an active cell
      - 11.1.1. How to return cell value
      - 11.1.2. How to save cell value
      - 11.1.3. How to return the value displayed in a cell
      - 11.1.4. How to format cell with a style
      - 11.1.5. How to clear cell
      - 11.1.6. How to return cell address
      - 11.1.7. How to return column/line number for an active cell
    - 11.2. Navigating to active cell
      - 11.2.1. How to move to another cell
      - 11.2.2. How to prevent the user from leaving a worksheet
      - 11.2.3. How to return the content from the cell below
      - 11.2.4. Workshops
    - 11.3. References to cells and cell ranges
      - 11.3.1. How to select cell with a given address
      - 11.3.2. How to select cell range with a given address
      - 11.3.3. How to select discontinuous cell range
      - 11.3.4. How to select a named column (e.g., A)
      - 11.3.5. How to select a numbered column
      - 11.3.6. How to check whether a column is hidden and how to hide/unhide a column or line
      - 11.3.7. Hot to fit column width to content
      - 11.3.8. How to select a numbered line
      - 11.3.9. How to fit line height to content
      - 11.3.10. How to set standard line height
      - 11.3.11. How to count the number of columns/lines in a cell range
      - 11.3.12. How to return cell address with specified coordinates (line number and column number)
      - 11.3.13. Workshops

12. Returning user's data
    12.1. How to use the "InputBox" function
    12.2. Converting data types
13. End of the training course (test + discussion of the results, training evaluation)

Training method

Lecture + workshops (amount proportional to lecture) + workshops check (individual) + workshops discussion.

Training days and hours

3 days, 24 training hours

After-training development path

- training course "*VBA in MS Excel – Intermediate Level. Worksheets, workbooks, files*"
- further integrated VBA training courses (includes 4 training courses in total)