



# The Modern Excel Scripts Programming



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## Programming in Excel – Scripts

A customizable course according to your company's requirements.

### Duration

8 hours

### Objectives

- 1) Introduction to Excel Scripting
- 2) Excel VBA Fundamentals
- 3) Advanced VBA Programming
- 4) JavaScript Add-ins for Excel
- 5) Excel Automation and Integration
- 6) Real-world Applications and Case Studies
- 7) Q&A and Expert Panel Discussion

The course is totally hands-on. No theory! No PowerPoint presentation. Throughout the course you practice the skills on Excel. The exercises are based on real life data scenarios.

### Pre-requisite

You must have worked on Excel for at least 12 months.



# Outline of Scripts Programming course:

## 1. Introduction to Excel Scripting

### 1.1 Overview of Scripting in Excel

- Understanding the role of scripting and programming in Excel.
- Introduction to the Excel Object Model.

### 1.2 Macro Basics

- Recording and running macros.
- Exploring the Visual Basic for Applications (VBA) editor.

### 1.3 Excel Scripting Languages

- Overview of VBA, Python, and JavaScript in Excel.
- Choosing the right scripting language for specific tasks.

## 2. Excel VBA Fundamentals

### 2.1 VBA Basics

- Variables, data types, and basic syntax in VBA.
- Procedures, functions, and subroutines.

### 2.2 Control Structures in VBA

- Using If-Then-Else statements.
- Implementing loops (For, Do-While) in VBA.

### 2.3 Excel Object Model in VBA

- Navigating and interacting with worksheets, cells, and ranges.
- Working with workbooks and worksheets using VBA.

## 3. Advanced VBA Programming

### 3.1 User Forms and Controls

- Creating and customizing user forms.



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- Adding and managing form controls.

### 3.2 Error Handling in VBA

- Understanding error types in VBA.
- Implementing error handling techniques.

### 3.3 Advanced VBA Techniques

- Working with arrays and collections.
- Using advanced string manipulation and date functions.

## 4. JavaScript Add-ins for Excel

### 4.1 Introduction to JavaScript Add-ins

- Setting up the development environment.
- Overview of Office Add-ins and JavaScript API for Excel.

### 4.2 Excel Task Panes with JavaScript

- Creating custom task panes.
- Interacting with Excel data using JavaScript.

### 4.3 Excel Automation with Office.js

- Automating Excel tasks using JavaScript.
- Utilizing Office.js for advanced functionality.

## 5. Excel Automation and Integration

### 5.1 Web Scraping with Excel

- Introduction to web scraping techniques.
- Using Excel to scrape data from websites.

### 5.2 Integrating Excel with Other Applications

- Automation with external databases.
- Connecting to APIs and fetching data.

### 5.3 Power Automate and Excel

Automating workflows using Power Automate.  
Integrating Power Automate with Excel.



## 6. Real-world Applications and Case Studies

### 6.1 Building Custom Excel Solutions

- Developing practical solutions for specific business needs.
- Enhancing productivity with custom scripts and programs.

### 6.2 Advanced Data Analysis with Scripting

- Performing complex data analysis tasks with scripting.
- Creating custom reports and dashboards.

### 6.3 Troubleshooting and Debugging

- Strategies for troubleshooting and debugging scripts.
- Addressing common issues in Excel scripting.

## 7. Q&A and Expert Panel Discussion

### 7.1 Participant Questions and Discussions

- Applying all learned concepts to create a sample report.
- Addressing common challenges in report design

### 7.2 Leveraging Expertise

- Engaging with expert speaker.
- Gaining insights into advanced scripting techniques.