Undocumented Matlab

unbelievable features; unbelievable quality; unbelievable cost effectiveness; unbelievable service

CREATING PROFESSIONAL MATLAB SOFTWARE

COURSE OUTLINE

1. **Advanced programming in Matlab**
   a. m-files vs. scripting
   b. Using the Matlab editor, debugger and code analyzer
   c. Debugging techniques
   d. Using the different documentation/help resources
   e. Conventions and best practices
   f. Matlab function types
   g. Matlab data-storage types
   h. User documentation and maintainability
   i. Writing robust code
   j. Exception handling, data checks
   k. Using the publish tool

2. **Deploying Matlab software**
   a. Mechanisms for IP protection
   b. P-code vs. m-code vs. compilation
   c. Improving software branding
   d. Target-platform deployment
   e. Solving deployment issues
   f. Deploying documentation
   g. Version control

3. **Performance tuning**
   a. When and how much; when to stop
   b. Standard optimization techniques
   c. Effects of using different storage types
   d. I/O, Graphics and GUI aspects
   e. Perceived vs. actual performance
   f. Profiling techniques

4. **Advanced topics**
   a. Read/write non-standard file formats, I/O
   b. Accessing Internet webpages and data
   c. Time-series analysis
   d. Object-oriented Matlab
   e. Using function handles
   f. Using timers
   g. Using external code: Java, ActiveX, Dot-Net, DLL, FEX

5. **Where next?** – topics and resources for further learning

Summary

A 2-day advanced Matlab crash course.

You will learn:

- how to create high-quality, robust and maintainable Matlab programs
- how to avoid and solve potential pitfalls in your program's execution
- how to deploy professional software
- how to protect your IP
- how to improve branding
- how to maximize the performance of your application at reasonable cost
- skills that will enable you to continue learning advanced topics by yourself, at your own pace

Target audience

Matlab users with some experience using Matlab, who wish to improve their programming quality and effectiveness; Matlab users who wish to sell or deploy professional Matlab-based software.

Basic familiarity with the Matlab environment, data types and functions is assumed.