Undocumented Matlab

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

OBJECT ORIENTED MATLAB PROGRAMMING

COURSE OUTLINE

1. **Introduction to MATLAB OOP**
   a. comparing paradigms: OOP vs. procedural programming
   b. importance of OOP for development and maintainability
   c. MATLAB OOP is gaining momentum; MATLAB code is increasingly using OOP
   d. benefits and drawbacks of MATLAB OOP
   e. MATLAB OOP's historic evolution and future outlook

2. **Programming Object-Oriented MATLAB**
   a. basic components of MATLAB OOP: packages, classes, properties, methods, and events
   b. the format of a Matlab class
   c. handle vs. value classes
   d. handling accessibility attributes
   e. specifying property types (undocumented)
   f. property setter and getter methods
   g. using static classes
   h. the singleton design pattern
   i. object pooling
   j. runtime performance aspects
   k. coding conventions and best practices

Summary

A 1-day advanced Matlab course.

You will learn how to:

- create high-quality, maintainable Matlab programs
- use the modern object-oriented programing paradigm, replacing "spaghetti code"
- participate in a guided classroom project, gaining hands-on experience

3. **Guided classroom project**
   a. create a data-structure container class
   b. hands-on experience, directly relates to the material presented above
   c. one-on-one guidance and assistance
   d. on-going feedback and suggestions on programming quality, efficiency, robustness, maintainability, and performance
   e. resulting code can easily be extended and reused later

Target audience

Matlab users of any level, from beginners to advanced, who wish to improve their program's maintainability and usability.

Familiarity with the Matlab environment and programming is assumed.