

# QUICKSTART MAC OS PROGRAMMING

## **Description:**

Jump right in and learn to program for the Mac OS. If you are a C programmer from any platform and not afraid to get your hands dirty, then this intensive 5 day class is for you. The first 3.5 days are meant to cover the “foundation” required for all Macintosh applications. The last 1.5 days are broken into multiple tracks. Students decide which track is pertinent to their need and work on that one application. Current tracks are: QuickDraw, System Object Model (SOM), and Porting to PowerPC. In this course you develop an application the way one does in real life. No one starts from scratch. You use the many developer resources to get the basis of your code and modify as necessary.

## **Facts:**

Leader led  
5 days  
\$1,500.00

## **Target Audience:**

Skilled C programmers from any platform who like to get their hands dirty.

## **Prerequisites:**

One year's experience of C programming with the completion of at least one complex program (5000+ lines of code).

## **Course Outline:**

### I. Introduction

### II. Menus

- Create Menus in Resedit
- Read Menus into App. & then display them.
- respond to mouse click in menubar
- respond to CMD Key equivalent.
- enable & disable Menu items as well as entire menus
- Add a list of DA's to apple Menu.
- Add items & delete items from menu

### III. Files

- implement file menu item Open
- implement file menu item Save and Save As...
  - Use Apple Safe Save technique.

- IV. Res manager
  - Read Resources from App's Res fork
  - Read Resources from System.
  - create & Modify resources in your document.
  - Create Custom res Template in resedit
  - Learn to use safely in low mem conditions.
- V. Window manager part 1
  - Create & display windows in you App.
  - Resize, Zoom,drag & close windows in your App.
  - Rename windows
  - Link data to a window
  - Dispose windows when needed.
- VI. QuickDraw
  - Draw lines,simple shapes into a window
  - Set the active drawing area of a window
  - Plot an icon in a window.
  - Change cursors
  - Draw using multiple colors, patterns & pen styles & sizes
- VII. Event Manager
  - Respond to user generated events (mouse,keyboard,disk insert)
  - Respond to system generated events (update,activate,suspend,resume)
  - Respond to required Apple Events
  - yield time to other Apps.
- VIII. Window manager part 2
  - Update contents of window when needed.
  - Activate & Deactivate windows as needed.
  - Dispose windows when needed.
- IX. Memory manager
  - Describe when to use a handle and when to use a pointer and why.
  - Allocate relocatable & non-relocatable blocks in memory.
  - Know when & how to lock and unlock Relocatable block safely.
  - Know how to detect and correct memory leaks
  - Know when & how to use temp. Memory and system heap Memory.
  - know how to recover from a low memory situation
- X. Dialogs
  - Create dialogs in Resedit
  - Get & display Dialogs in App Program.
  - respond to events when Dialogs is displayed
  - Programmatically set text in dialog.
  - Close & dispose Dialogs

#### XI. Controls & scrolling

- Attach controls to a window
- Enable,Disable,show & hide controls as needed.
- move & resize controls as needed.
- respond to mouse click in control
- Scroll window contents

#### XII. Program start-up

- Check for system features required by App.
- Init Toolbox Managers in the correct order.
- Set-up memory manager to reduce fragmentation.
- Install Apple event handlers

#### XIII. Scrap manager -- Drag manager

- Handle cut Copy & paste from edit menu
- Exchange data with other Apps via clipboard
- Use drag manager to Exchange Data