

MOB700 : Objective C Programming

Code : MOB700

Duration : 3 days

Category : Mobile

Audience :

This course is designed for participants who want to learn the basics of Objective C in preparation for the development of iOS and OS X applications.

Prerequisites :

No programming knowledge is required to participate in this course. Prior knowledge of programming languages such as Java or Visual Basic is beneficial for the understanding.

Realization :

The theory is treated on the basis of presentation slides. Demos are used to clarify the theory. There is ample opportunity to practice and theory and exercise are interspersed. The course uses the XCode development environment.



Objective C Fundamentals



Contents :

In the course Objective C Fundamentals participants learn the basics of the Objective C programming language for iOS development. The course does not address the development of iOS app, but is a preparatory course in which the Objective C language in which iOS apps are written is treated. First Apple's XCode development environment is discussed and how to create and manage projects. Next attention is paid to the basic syntax of the ANSI C programming language with statements, variables, data types, declarations, selections with if and iterations with for and while loops. Also more advanced features of C are addressed like using functions and passing of parameters, creating user defined data types with structs and typedefs, working with pointers and addressing and allocating memory. Next specific Objective C features like objects, classes, instance variables and methods are discussed as well as object communication through messages, accessors and properties. Also the Foundation framework that provides a set of useful primitive Objective C classes is treated as well as the functionality that it adds to Objective C. Finally the memory management model of Objective C is on the course program.

Module 1 : XCode Intro

- Xcode IDE
- Project creation
- Setting preferences
- Using navigator
- Groups
- Code Editor
- Jump bar
- Utilities

Module 2 : ANSI C Language

- Variables
- Data types
- C library
- Operators
- Selections
- if and else
- switch and case
- Iterations
- for and while

Module 3 : C Constructs

- Arrays
- Multiple dimensions
- Functions
- Scope of variables
- Parameter passing
- Call by value
- Structs
- Typedefs
- Enums
- Pointers

Module 4 : Objective C

- Objects and Classes
- Declaring a Class
- Implementing a Class
- Creating Objects
- Instance variables
- Using Methods
- Accessors
- Using Properties
- Property Attributes
- Conventions
- Messages
- Method Dispatch
- Initializers
- Custom Initializers
- Designated Initializers
- Initializer Chain

Module 5 : Foundation Framework

- What is Foundation Framework
- NSObject
- Strings
- NSString
- Using Arrays
- NSArray
- NSNumber
- NSDictionary
- NSError
- NSData
- NSException

Module 6 : Memory Management

- Understanding Memory
- Understanding Memory Address Basics
- Memory Pointers
- Addresses
- Understanding Pointers
- Stack and Heap Memory
- Automatic Memory Management
- Requesting Memory
- Deallocating Memory
- Managing Memory in Objective-C
- Using the Retain/Release Model
- Retain counts