

Object Oriented Programming using C# Duration:50 Hours

Source	Topic/Activity Name
Chapter 1 and Chapter 2	Objectives
	The foundation of Object-Orientation
	Characteristics of the Object-Oriented Approach
	Phases of Object Orientation
	Introducing C#
	Classes in C#
	Naming variables in C#
	Declaring and Initializing variables
	Data types in C#
	Accepting and Storing values in member variables
	Creating a sample C# program
	Compiling and executing C# program
	Summary
B Chapter 3	Objectives
	Arithmetic operators
	Arithmetic assignment operators
	Unary operators
	Comparison operators
	Logical operators
	The if ... else construct
	The switch ... case construct
	Activity:Calculator using conditional construct
	The while loop
	The do... while loop
	The for loop
	The break and continue statements
	Summary
	Chapter 4
Defining abstraction	
Defining encapsulation	
Types of access specifiers	
Defining methods	
Calling methods	
Using methods with parameters	
Summary	
Chapter 4	

	Static functions
	Objectives
	Introducing .Net framework
	Components of the .Net framework
	Creating projects and solutions
	Compiling and Executing Project
	Summary

Source	Topic/Activity Name
Chapter 5	Objectives
	Describing memory allocation
	Using structure
	Declaring Enumeration
	Implementing Enumeration
	Declaring an array
	Initializing and Assigning Values to Array
	Manipulating Array Elements
	Multidimensional array
	Using collections
Summary	

Source	Topic/Activity Name
Chapter 6 and Chapter 7	Objectives
	The need of constructors
	Types of constructors
	Declaration of destructors
	Identifying the life cycle of an object
	Static polymorphism
	Dynamic polymorphism
	Implementing function overloading
	Function signature
	Constructor overloading
	Need for Operator Overloading
Summary	

Source	Topic/Activity Name
Chapter 7 and Chapter 8	Objectives
	Overloading Unary Operators
	Overloading Binary Operators
	Kinds of relationships
	Implementing inheritance
Summary	

Source	Topic/Activity Name
Chapter 8 and Chapter 9	Objectives
	Using abstract classes
	Using abstract methods
	Using virtual functions

	Using sealed classes
	Working with interfaces
	Inheriting interfaces
	Implementing the file I/O operations
	FileStream class
	Summary

Source	Topic/Activity Name
Chapter 9, Chapter10	Objectives
	StreamReader class
	StreamWriter class
	BinaryReader class
	BinaryWriter class
	DirectoryInfo class
	FileInfo class
	Types of errors
	Exception classes
Summary	

Source	Topic/Activity Name
Chapter 10, Chapter 11	Objectives
	Handling exceptions
	Creating the User-Defined Exceptions
	Implementing threads
	Working with threads
	Thread life cycle
	Summary

Source	Topic/Activity Name
Chapter 11, Chapter 12	Objectives
	Introducing Multithreading
	Defining thread priority
	Setting the thread priority
	Synchronizing threads
	Application Domain
	Declaring delegates
	Instantiating delegates
Summary	

Source	Topic/Activity Name
Chapter 12, Chapter 13	Objectives
	Using delegates
	Types of delegates
	Working with events
	Using delegates with events
	Passing event parameters

	Applying attributes
	Using predefined attributes
	Summary

Source	Topic/Activity Name
Chapter 13	Objectives
	Creating custom attributes
	Viewing metadata
	Performing type discovery
	Summary

Source	Topic/Activity Name
Chapter 14	Objectives
	Intro of Window forms
	Creating New windows forms
	Multiple Example of Windows Programming [GUI]
	Summary

All Activities in C#.net

Example of Prime Numbers

Exmple of Even Numbers

Example Factorial program

Number Patterns Using C#.net

```

1
1 2
1 2 3
12 3 4
1 2 3 4 5
1 2 3 4 5 6

```

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Sum Of two Arrays using 2D

String Reverse

Note: The Demo Example will be Separate to Trainee Example
Each and every Chapter having Different Examples

