



**BENEFITS OF LEARNING**

# VLSI

**(Very Large Scale Integration)**

## Introduction To VLSI

- ⇒ What Is Vlsi ? Evolution Of Vlsi
- ⇒ Vlsi Design Flow Overview
- ⇒ Moore's Law And Scaling Trends
- ⇒ Asic Vs Fpga
- ⇒ Applications Of Vlsi In Real Life

## Digital Electronics

- ⇒ Number Systems , Conversions
- ⇒ Logic Gates,boolean Algebra, Minimization Techniques (k-maps)
- ⇒ Combinational Circuits : Adders, Mux, Encoders,decoders, Comparators
- ⇒ Sequential Circuits : Latches, Flipflops,registers,shift Registers
- ⇒ Fsms : Moore And Melay Machines

## Verilog HDL

- ⇒ Verilog Syntax: Modules,ports,nets,registers
- ⇒ Modeling Styles: Behavioral,dataflow,structural
- ⇒ Procedural Blocks : Always,initial, Blocking/non-blocking
- ⇒ Tasks And Functions, Parameterization,fork Join
- ⇒ Design Hierarchy And Testbenches
- ⇒ Simulation With Eda Playground And Modelsim

## SYSTEM VERILOG

- ⇒ Data Types: Logic,bit,arrays,packed/unpacked
- ⇒ Interfaces,fork Join None, Fork Join Any
- ⇒ Randomization,constraints,for Each Loops
- ⇒ System Verilog Assertions(sva): Immediate And Concurrent
- ⇒ Functional Coverage: Coverpoints,cross Coverage
- ⇒ Testbench Architecture

## UVM

- ⇒ Introduction To Verification Methodologies – Uvm
- ⇒ Verification Planning And Testbench Architectrue
- ⇒ Uvm Overview : Components

## Debugging in C#

- ⇒ Various Types of .NET Projects
- ⇒ Tracing, Debugging, Build
- ⇒ Compile Options
- ⇒ Using break points
- ⇒ Using break conditions
- ⇒ Debugging Exception
- ⇒ Using watch and output window
- ⇒ What are Diagnostics?
- ⇒ Debug and Trace Classes
- ⇒ Creating multiple projects within one solution
- ⇒ Customizing Visual Studio Settings – Extensions, NUGet Package, Environmental Settings
- ⇒ Using watch and output window
- ⇒ Creating multiple projects within one solution
- ⇒ Customizing Visual Studio Settings – Extensions, NUGet Package, Environmental Settings





**QualityThought**

 **91211 88426**

**Quality Thought Infosystems India (P) Ltd.**  
#302, Nilgiri Block, Ameerpet, Hyderabad-500016  
[www.qualitythought.in](http://www.qualitythought.in) | [info@qualitythought.in](mailto:info@qualitythought.in)