

APEEC

transforming careers...



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CORE .NET

INTRODUCTION TO .NET

- Introduction to .Net Platform
- Net Framework – BCL & CLR
- CLR, CTS, MSIL & other tools.
- Multiple Language Interaction
- Security in .NET – CAS
- Features of .Net, Versions
- Language Interoperability

C#.Net

- Advantages/Disadvantages
- Why C#, Features of C#
- .NET Namespaces

Programming Using Visual C#.Net

- C#.Net Program Design
- Data types, Value types
- Reference types (CTS)
- Variables and Constants o Strings
- Arrays, String formatting
- Statements and flows
- Command-line arguments
- C# 3.0/3.5 features – Implicit types
- Extension Methods and more

Object Oriented Concepts

- Classes & objects, This & Basekeyword
- Properties – Read Only Write
- Accessibility levels, specifiers
- Constructors, Method overloading
- Class (static) variables & methods
- Object destruction
- 'ref' and 'out' parameters
- Enumerations, Indexers
- Inheritance and Polymorphism
- Creating derived classes
- Method overriding and hiding
- Polymorphism o Virtual Methods
- Casting objects, Object Initializers
- Abstract & override method
- Abstract / Sealed / Static/ Classes
- Collections, Generics

Error Handling

- Unstructured error handling
- Structured error handling
- Exception Handling • Debugging the application
- Debug and Trace classes • Code Optimization

MultiThreading

Asynchronous Programming

Dependency Injection

Introduction To Windows Forms

- Windows forms library WinForms
- Layout Enhancements
- Forms and controls – Hierarchy
- Menus • Extender Controls
- Built-in dialog boxes & printing

SQL Server Basics

ADO.Net 1.1/2.0/Linq

- History and background
- From DAO to ADO.NET
- ADO.NET LINQ
- ADO.NET design goals
- ADO.NET architecture, components
- ADO.NET relation with .NET tools
- DataSet in RealTime Scenarios

ADO.Net Components

- Connected environment
- Disconnected environment
- ADO.NET object model
- Data sources • Providers & connections
- Commands and data reader
- Data sets and data adaptors
- Data tables, rows and columns
- Constraints and relations
- Data-centric applications
- New ADO.Net Hierarchy

Data Sources, Data Providers

- Connecting to a data source
- SQL Server .NET data provider
- OLE-DB .NET data provider
- Connection pooling
- ADO.NET exceptions

Accessing Data Connected Environment

- Creating commands
- Executing commands
- Reading data using data reader
- Parameterised queries (input & output parameters)
- Adding, editing and deleting data
- Stored procedures

Disconnected Environment

- Why a disconnected environment?
- DataSet features • DataAdapter features
- Filling data sets • Read data tables
- Read data from rows, columns
- Batch queries o Data sets
- Dataset Functionality • Dataset Navigation
- Dataset Optimistic Concurrency
- Visual Studio Data Menu tools



Sorting, Searching & Filtering

- Searching in data sets
- Find on primary keys
- Searching on any column/row
- Wildcard searches
- Data views - Sort / Filter / Search

Windows Services

- Introduction, Create windows services
- Compile, run & install services
- Event log services

Application Deployment

- ClickOnce Deployment
- Deployment – other method

SQL Server Basics

ASP.Net Core MVC

- Net Framework
- Design Patterns(MVC)
- Why .Net Core

Programming with C#.Net

Difference between ASP.Net MVC

ASP.Net Core MVC

ASP.Net Core With real-time scenarios

Introduction to ASP.Net Core

- Features and Advantages
- ASP.NET Core vs. ASP.NET MVC vs. ASP.NET Web Forms
- Understanding ASP.NET Core MVC

ASP.NET Core First Application

- Project Structure
- Understanding the Life Cycle of ASP.Net Core Request

Controllers & Action Methods

- Controllers
- Action Methods and IActionResult object
- Understanding Action Selectors • Action Filter
- Asynchronous Action Methods
- Views – CRUD Operations Helpers
- Html Helpers • URL helpers • Tag Helpers

Model Binding

- Benefits of model binding
- Data binding
- Custom model binding

Validations & Data Annotations

- Client side validations
- Server side validations

Security

- Forms authentication
- Window authentication
- Password authentication

MVC and Entity Framework Core

State management Techniques

- Client side state management
- Server side state management

ASP.NET Core

- What is asp.net core
- How to use asp.net core Web Caching Routing
- Conventional based Routing • Attribute routing

Middlewares How to add middlewares

- Difference between run and usemiddlewares
- Use of middlewares

Module Development

- Difference between middlewares & httpmodule
- What are http handlers
- Web API and JQuery Ajax
- What is Web API • How do webAPI work

MS SQL Server

Concepts of DBMS

- Data / Information / Database
- Introduction to DBMS • Data Models
- HDBMS, NDBMS, RDBMS, ORDBMS
- Entity–Relationship (E-R), Normalization

Introduction to SQL Server

- Advantages & limitations
- Login & Password
- Server Type & Server Name
- Authentication Modes - SQL Server, Windows
- SQL Server Management Studio & Tools
- Object Explorer, Query Editor

Introduction To SQL

- Types of SQL Commands, Data Types
- DDL, DML, DQL, DCL, TCL
- Database - Creating / Altering / Deleting
- Create / Alter / Drop Tables

Table Constraints

- Not Null, Unique, Default & Check
- Primary Key, Referential Integrity or foreign key

Data Manipulation Language (DML)

- Insert / Update / Delete
- Truncate & Drop
- Create a Table From Another Table
- Insert Rows From One Table To Another



Data Query Language (DQL)

- Simple Select, Select with row filters
- Where clause with relational operators
- Logical operators & Special operators
- Between ... and, In, Like, Is Null, Isnull()
- Order By Clause, Distinct Keyword Column aliases

Transaction Management

- User & Server schema, Implicit Transactions
- Begin / Commit / Rollback / Save Transaction
- Role of Log File In Transaction Management

Built In Functions

- Numeric/Character/Date/Conversion/Identity
- Aggregate Functions sum(),avg(), etc.
- Group By & Having Clauses
- Ranking Functions & Top Clause

Set Operators

- Union, Union all ,Intersect & Except

Joins

- Simple, Equi / Non-Equi, Natural, Self, Inner, Outer, Cross or Cartesian

Sub Queries

- Single / Multi Row, Any, Some, ALL, Exists & Not Exists, Nested,

indexes

- Create, Alter & Drop
- Composite / Clustered
- Performance variation

DBA Activities

- Authenticated Login - SQL Server/Windows
- Create / Alter / Drop users
- Granting & Revoking Permissions

Views

- Create / Alter / Drop Views
- Simple, Complex, Indexed & Partition views





JAVA / PYTHON / .NET
FULL STACK



DATA SCIENCE



Azure
(ADMIN, DEVOPS & DATA ENGINEERING)



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