



Transact-SQL Programming - Fast Track

Course Title

Transact-SQL Programming - Fast Track

Instructor

[Amit R S Bansal](#)

Total Duration

7 hours 20 mins

Total Lecture Time

2 hours 45 mins

Total Demo Time

4 hours 35 mins (*Yeah, demos are the real value*)

Delivery Format

Video Course. Stream anywhere, anytime, any device, as many times.

Course Description

Programming with Transact-SQL is an essential skill if you are developing applications for SQL Server, or even if you are just querying data from SQL Server. Irrespective of your role - Developer, Database Administrator, Data Architect, Data Analyst, Business Intelligence, Data Scientist, or just a power user – T-SQL programming skills are critical for you to be successful. This 15-hour video course gives you a strong foundational skill with T-SQL programming and loads of practical examples. You will learn about T-SQL language elements, logical flow, Query Optimizer, Execution Plans, Table Variables, Temporary Tables, Views, Stored Procedures, User Defined Functions, Triggers, Dynamic SQL, Transactions & Concurrency & Error Handling. Yes, very comprehensive coverage in a fast-track mode, packed with loads of real-world demos. Along the way, you will learn about a few T-SQL enhancements in different versions of SQL Server. Wherever relevant, query tuning is discussed with examples. At the end of the course, you will be able to program with T-SQL.

Pre-Requisite

Just basic experience with SQL Server.

Course Outline

Module 0: Introduction

- Before You Begin
- Modules

- Demo Setup
- What Not To Expect
- What To Expect
- How To Get The Best Out Of This Course

Module 1: Introduction To T-SQL Programming

- Historical Information
- Logical Flow of a SELECT Statement
- T-SQL Language Elements
- T-SQL Programmable Techniques/Objects
- Query Optimizer Basics
- Understanding Execution Plans
- TRUE, FALSE & UNKNOWN
- Demos

Module 2: Table Variables & Temporary Tables

- Introduction
- Temporary Tables
- Table Variables
- Temporary Tables vs Table Variables
- Tempdb Considerations
- Demos

Module 3: Views

- Introduction
- Limitations
- Modifying Data Through Views
- View Options
- Indexed Views
- Demos

Module 4: Stored Procedures

- Introduction
- Types of SPs
- Advantages
- Best Practices
- Demos

Module 5: User Defined Functions (UDF)

- Introduction
- Uses & Benefits
- Types
- Limitations/Characteristics
- Stored Procedures vs UDFs
- Demos

Module 6: Triggers

- Introduction
- FOR or AFTER Triggers
- INSTEAD OF Triggers
- Special Tables
- Demos

Module 7: Dynamic SQL

- Introduction
- Use Cases
- Best Practices
- Demos

Module 8: Transactions & Concurrency

- Data Modification
- Concurrency Architecture
- Isolation Levels
- Concurrency Problems vs Isolation Levels
- Deadlocks
- Transactions
- Best Practices
- Demos

Module 9: Error Handling

- TRY/CATCH Blocks
- XACT_ABORT
- Useful Techniques
- Demos

Module 10: Wrap Up

[Learn More: http://bit.ly/SQLMaestrosVC](http://bit.ly/SQLMaestrosVC)

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Module	Content Type	Duration (mm:ss:00)
Module 0: Introduction		
	Lecture	Full Module
		10:23:00
Before You Begin The Demos		
	Lecture	Before You Begin The Demos
		7:42:00
Module 1: Introduction To T-SQL Programming		
	Lecture	Intro & Agenda
		1:29:00
	Lecture	Historical Information
		3:07:00
	Lecture	Logical Flow of a SELECT Statement
		3:13:00
	Demos	Demos: Logical Flow of a SELECT Statement
		12:01:00
	Lecture	T-SQL Language Elements
		5:24:00
	Lecture	T-SQL Programmable Techniques/Objects
		5:24:00
	Lecture	Query Optimizer Basics
		6:41:00
	Lecture	Understanding Execution Plans
		6:41:00
	Demos	Demos: Query Optimizer Basics
		15:11:00
	Demos	Demos: Understanding Execution Plans
		15:11:00
	Lecture	TRUE, FALSE & UNKNOWN
		3:20:00
	Lecture	Dealing With NULLs
		3:20:00
	Demos	Demos: TRUE, FALSE & UNKNOWN (NULLs)
		8:34:00
	Lecture	Summary
		1:55:00
		Total Duration
		60:55:00
Module 2: Table Variables & Temporary Tables		
		Intro & Agenda
		Introduction
		Temporary Tables
		Local Temporary Tables
	Lecture	Global Temporary Tables
		8:46:00
	Demos	Demos: Temporary Tables
		13:24:00
	Lecture	Table Variables
		3:00:00
	Demos	Demos: Table Tables
		7:25:00
		Temporary Tables vs Table Variables
		Tempdb Considerations
	Lecture	Summary
		4:04:00
		Total Duration
		36:39:00
Module 3: Views		
		Intro & Agenda
		Introduction
	Lecture	Limitation & Characteristics
		5:41:00

Demos	Demos: Views Introduction	12:27:00
Lecture	Modifying Data Through Views	1:32:00
Demos	Demos: Modifying Data Through Views	11:57:00
Lecture	View Options	2:53:00
Demos	Demos: View Options	9:10:00
Lecture	Indexed Views	2:26:00
Demos	Demos: Indexed Views	10:30:00
Lecture	Summary	1:14:00
	Total Duration	57:50:00

Module 4: Stored Procedures

	Intro & Agenda	
	Introduction	
	Types of Stored Procedures	
	Advantages	
Lecture	Best Practices	10:05:00
Demos	Demos: Stored Procedures	16:08:00
Lecture	Summary	0:56:00
	Total Duration	27:09:00

Module 5: User Defined Functions

	Intro & Agenda	
	Introduction	
	Uses & Benefits	
	Scalar Functions	
	Table Valued Functions	
	Inline Table Valued UDFs	
	Multi-Statement Table Valued UDFs	
	Limitations/Characteristics	
Lecture	Stored Procedures vs UDFs	16:18:00
Demos	Demos: Scalar Functions	20:14:00
Demos	Demos: Table Valued Functions	16:56:00
Lecture	Summary	1:03:00
	Total Duration	54:31:00

Module 6: Triggers

	Intro & Agenda	
	Introduction	
	FOR or AFTER Triggers	
	INSTEAD OF Triggers	
Lecture	Special Tables	12:41:00
	Demos:	
	Server Triggers	
	Database Triggers	
Demos	LOGON Triggers	9:40:00
Demos	Demos: Object Level Triggers	18:52:00
Lecture	Summary	1:04:00
	Total Duration	42:17:00

Module 7: Dynamic SQL

	Intro & Agenda	
	Introduction	
	Use Cases	
Lecture	Best Practices	8:12:00
Demos	Demos: Introduction to Dynamic SQL	20:27:00
Demos	Demos: Use Cases of Dynamic SQL	15:34:00
Demos	Demos: SQL Injection	13:27:00
Lecture	Summary	0:49:00
	Total Duration	58:29:00

Module 8: Transactions & Concurrency

	Intro & Agenda	
	Data Modification	
	Concurrency/Locking Architecture	
	Isolation Levels	
	Deadlocks	
	Transactions	
Lecture	Best Practices	31:23:00
	Demos:	
	Dirty Reads	
	Non-Repeatable Reads	
	Phantom Reads	
Demos	Deadlocks	32:36:00
Lecture	Summary	1:11:00
	Total Duration	65:10:00

Module 9: Error Handling

	Intro & Agenda	
	TRY/CATCH Blocks	
	XACT_ABORT	
Lecture	Useful Techniques	3:48:00
Demos	Demos: Error Handling	11:43:00
Lecture	Summary	0:54:00
	Total Duration	16:25:00

Module 10: Wrap Up

Lecture	Full Module	2:46:00
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Total Course Duration (mm:ss:00)	440:16:00
Total Course Duration: 7 hours 33 minutes	

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