Database Fundamentals: Storage

with Adam Wilbert

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	Topics from MTA Exam 98-364																					
	Understand core database concepts	1.1 Understand how data is stored in tables	1.2 Understand relational database concepts	1.3 Understand data manipulation language (DML)	1.4 Understand data definition language (DDL)	Create database objects	2.1 Choose data types	2.2 Understand tables and how to create them	2.3 Create views	2.4 Create stored procedures and functions	Manipulate data	3.1 Select data	3.2 Insert data	3.3 Updated data	3.4 Delete data	Understand data storage	4.1 Understand normalization	4.2 Understand primary, foreign, and composite keys	4.3 Understand indexes	Administer a database	5.1 Understand database security concepts	5.2 Understand database backups and restorecomposite keys
Understanding Data Storage Models																						
What are databases?		X	X																			
Understanding flat file databases		X	X																			
Understanding hierarchical databases		X	X																			
Understanding relational databases		X	X																			
Exploring database fundamentals			X														X	X	X			
Calculating values			X																			

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Building Your Server																							
Understanding the role of the server			X																		X	X	
Downloading SQL Server 2014 Express																							
Installing SQL Server 2014 Express																							
Previewing the SQL Server Management Studio (SSMS) graphical interface			X																				
Using SSMS to restore a database			X																				
Creating your first database in SSMS			X																				
Creating your first table in SSMS		X																					
Modifying your table design		X																					

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Removing a database from the server			X																			
Introducing views		X	X						X													
Peering inside the system tables			X																			
Challenge: Start building your own database			X																			
Solution: Start building your own database			X																			

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Understanding Data Definition Language (DDL)																							
Writing commands in DML				X																			
Selecting data from a table				X								X										
Inserting records into a table				X									X										
Updating data				X										X									
Deleting rows from a table				X											X								
Merging data tables				X																			
Challenge: Using DML				X																			
Solution: Using DML				X																			

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Understanding Relational Database Concepts																							
Establishing relationships			X																				
Exploring data constraints			X																				
Adding indexes to tables			X																				
Following naming conventions			X																				
Organizing the design with schemas			X																				