Database Fundamentals: Storage

with Adam Wilbert

	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 restore
Creating Normalized Tables																						
Reducing redundancy with normalization			X														X					
Understanding the first normal form (1NF)																	X					
Understanding the second normal form (2NF)																	X					
Fixing partial dependencies																	X					
Understanding the third normal form (3NF)																	X					
Satisfying the fourth and fifth normal forms																	X					
Challenge: Normalizing a dataset																	X					
Solution: Normalizing a dataset																	X					

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Adding Key Fields																	
Understanding the role of key fields		X												X			
Creating a table's primary key in SQL Server Management Studio														X			
Understanding composite primary keys														X			
Creating composite primary keys														X			
Linking tables with foreign keys														X			
Creating a foreign key relationship in SSMS														X			

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Indexing Records																						
Understanding clustered indexes			X																X			
Adding a clustered index																			X			
Understanding non-clustered indexes																			X			
Creating a non-clustered index in SSMS																			X			
Creating a non-clustered index using DDL																			X			
Challenge: Creating table indexes																			X			
Solution: Creating table indexes																			X			

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