

Exam 98-364: Database Fundamentals – Skills Measured

Audience Profile

Candidates for this exam are seeking to prove introductory knowledge of and skills with databases, including relational databases, such as Microsoft SQL Server. It is recommended that candidates be familiar with the concepts of and have hands-on experience with the technologies described here, either by taking relevant training courses or by working with tutorials and samples available on MSDN and in Microsoft Visual Studio. Although minimal hands-on experience with the technologies is recommended, job experience is not assumed for these exams.

Skills Measured

NOTE: The bullets that appear below each of the skills measured are intended to illustrate how we are assessing that skill. This list is not definitive or exhaustive.

NOTE: In most cases, exams do NOT cover preview features, and some features will only be added to an exam when they are GA (General Availability).

Understanding core database concepts (20–25%)

Understand how data is stored in tables

- understand what a table is and how it relates to the data that will be stored in the database; columns/fields, rows/records

Understand relational database concepts

- understand what a relational database is, the need for relational database management systems (RDBMS), and how relations are established

Understand data manipulation language (DML)

- understand what DML is and its role in databases

Understand data definition language (DDL)

- understand how T-SQL can be used to create database objects, such as tables and views

Create database objects (20–25%)

Choose data types

- understand what data types are, why they are important, and how they affect storage requirements

Understand tables and how to create them

- purpose of tables; create tables in a database by using proper ANSI SQL syntax

Create views

- understand when to use views and how to create a view by using T-SQL or a graphical designer

Create stored procedures and functions

- select, insert, update, or delete data

Manipulate data (25–30%)

Select data

- utilize SELECT queries to extract data from one table, extract data by using joins, combine result sets by using UNION and INTERSECT

Insert data

- understand how data is inserted into a database, how to use INSERT statements

Update data

- understand how data is updated in a database and how to write the updated data to the database by using the appropriate UPDATE statements, update by using a table

Delete data

- delete data from single or multiple tables, ensure data and referential integrity by using transactions

Understand data storage (15–20%)

Understand normalization

- understand the reasons for normalization, the five most common levels of normalization, how to normalize a database to third normal form

Understand primary, foreign, and composite keys

- understand the reason for keys in a database, choose appropriate primary keys, select appropriate data type for keys, select appropriate fields for composite keys, understand the relationship between foreign and primary keys

Understand indexes

- understand clustered and non-clustered indexes and their purpose in a database

Administer a database (10–15%)

Understand database security concepts

- understand the need to secure a database, what objects can be secured, what objects should be secured, user accounts, and roles

Understand database backups and restore

- understand various backup types, such as full and incremental, importance of backups, how to restore a database