**Sys Catalog**

* sys.databases: Contains a row per database on the server instance.
* sys.objects: Contains a row per user-defined, schema-scoped object, including tables, views, procedures, functions, triggers, etc.
* sys.columns: Contains a row per column of an object, including column names, data types, and other metadata.
* sys.indexes: Contains a row per index or statistics object defined on a table or view.
* sys.schemas: Contains a row per schema defined in the database.
* sys.views: Contains a row per view defined in the database.
* sys.triggers: Contains a row per trigger defined on a table or view.
* sys.syslogins: Contains a row per SQL Server login.
* sys.server\_principals: Contains a row per server principal, including logins, users, and roles.
* sys.database\_principals: Contains a row per database principal, including users, roles, and application roles.
* sys.database\_permissions: Contains a row per permission that has been granted or denied to a database principal.
* sys.server\_permissions: Contains a row per permission that has been granted or denied to a server principal.
* sys.server\_role\_members: Contains a row per server-level role member.
* sys.database\_role\_members: Contains a row per database-level role member.
* sys.foreign\_keys: Contains a row per foreign key constraint defined on a table.
* sys.check\_constraints: Contains a row per check constraint defined on a table.
* sys.default\_constraints: Contains a row per default constraint defined on a table.
* sys.sysprocesses: Contains a row per active process on the SQL Server instance.
* sys.sysusers: Contains a row per database user, including system users.
* sys.dm\_exec\_sessions: Contains a row per authenticated session on the SQL Server instance.
* sys.dm\_exec\_requests: Contains a row per executing request on the SQL Server instance.
* sys.dm\_exec\_connections: Contains a row per connection made to the SQL Server instance.
* sys.dm\_tran\_locks: Contains a row per currently held or requested lock in the database.
* sys.dm\_exec\_query\_stats: Contains a row per query execution on the SQL Server instance, including CPU time, I/O time, and other metrics.
* sys.dm\_os\_memory\_objects: Contains a row per memory object allocated by SQL Server.
* sys.dm\_os\_performance\_counters: Contains a row per performance counter monitored by SQL Server.
* sys.dm\_db\_index\_usage\_stats: Contains a row per index used in the database, including reads, writes, and other statistics.
* sys.dm\_db\_partition\_stats: Contains a row per partition in the database, including row count, page count, and other metrics.
* sys.dm\_db\_missing\_index\_details: Contains a row per missing index recommendation in the database.
* sys.dm\_db\_missing\_index\_groups: Contains a row per missing index group in the database.
* sys.dm\_db\_missing\_index\_group\_stats: Contains a row per missing index group statistics in the database.

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earlier:

1. Example using sys.databases:

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SELECT name, database\_id, create\_date FROM sys.databases;

1. Example using sys.objects:

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SELECT name, type\_desc, create\_date, modify\_date FROM sys.objects WHERE type\_desc = 'USER\_TABLE';

1. Example using sys.columns:

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SELECT name AS column\_name, system\_type\_name, max\_length, is\_nullable FROM sys.columns WHERE object\_id = OBJECT\_ID('dbo.my\_table');

1. Example using sys.indexes:

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SELECT name AS index\_name, type\_desc, is\_unique, fill\_factor FROM sys.indexes WHERE object\_id = OBJECT\_ID('dbo.my\_table');

1. Example using sys.schemas:

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SELECT name AS schema\_name, principal\_id FROM sys.schemas;

1. Example using sys.views:

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SELECT name AS view\_name, create\_date, modify\_date FROM sys.views;

1. Example using sys.triggers:

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SELECT name AS trigger\_name, create\_date, modify\_date FROM sys.triggers WHERE parent\_class\_desc = 'OBJECT\_OR\_COLUMN';

1. Example using sys.syslogins:

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SELECT name, sid, createdate FROM sys.syslogins;

1. Example using sys.server\_principals:

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SELECT name, type\_desc, default\_database\_name FROM sys.server\_principals;

1. Example using sys.database\_principals:

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SELECT name, type\_desc, default\_schema\_name FROM sys.database\_principals;

1. Example using sys.database\_permissions:

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SELECT \* FROM sys.database\_permissions WHERE grantee\_principal\_id = DATABASE\_PRINCIPAL\_ID('my\_user');

1. Example using sys.server\_permissions:

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SELECT \* FROM sys.server\_permissions WHERE grantee\_principal\_id = SERVER\_PRINCIPAL\_ID('my\_login');

1. Example using sys.server\_role\_members:

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SELECT member\_principal\_id, role\_principal\_id FROM sys.server\_role\_members WHERE role\_principal\_id = SERVER\_PRINCIPAL\_ID('sysadmin');

1. Example using sys.database\_role\_members:

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SELECT member\_principal\_id, role\_principal\_id FROM sys.database\_role\_members WHERE role\_principal\_id = DATABASE\_PRINCIPAL\_ID('my\_role');

1. Example using sys.foreign\_keys:

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SELECT name AS foreign\_key\_name, create\_date, modify\_date FROM sys.foreign\_keys WHERE parent\_object\_id = OBJECT\_ID('dbo.my\_table');

1. Example using sys.check\_constraints:

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SELECT name AS check\_constraint\_name, create\_date, modify\_date FROM sys.check\_constraints WHERE parent\_object\_id = OBJECT\_ID('dbo.my\_table');

1. Example using sys.default\_constraints:

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SELECT name AS default\_constraint\_name, create\_date, modify\_date FROM sys.default\_constraints WHERE parent\_object\_id = OBJECT\_ID('dbo.my\_table');

1. Example using sys.sysprocesses:

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SELECT spid, program\_name, login\_time, last\_batch FROM sys.sysprocesses WHERE status = 'sleeping';

These examples demonstrate how to use the system catalog views to retrieve information about various database objects, their metadata, and associated permissions, users, and roles. Note that these are just a few examples, and there are many other system catalog views available in SQL Server.

1. To get a list of all tables in a database:

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SELECT name FROM sys.tables

1. To get information about the locks currently held in the database:

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SELECT \* FROM sys.dm\_tran\_locks

1. To get performance statistics for all queries executed on the server:

vbnetCopy code

SELECT TOP 10 qs.query\_text, qs.total\_worker\_time, qs.total\_logical\_reads, qs.execution\_count FROM sys.dm\_exec\_query\_stats AS qs CROSS APPLY sys.dm\_exec\_sql\_text(qs.sql\_handle) AS st ORDER BY qs.total\_worker\_time DESC

1. To get missing index recommendations for a specific table:

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SELECT migs.avg\_user\_impact, mid.statement, mid.equality\_columns, mid.inequality\_columns, mid.included\_columns, migs.user\_seeks, migs.user\_scans, migs.last\_user\_seek, migs.last\_user\_scan FROM sys.dm\_db\_missing\_index\_groups AS mig INNER JOIN sys.dm\_db\_missing\_index\_group\_stats AS migs ON mig.index\_group\_handle = migs.group\_handle INNER JOIN sys.dm\_db\_missing\_index\_details AS mid ON mig.index\_handle = mid.index\_handle WHERE mid.object\_id = OBJECT\_ID('dbo.MyTable')

These are just a few examples of how to use the system catalogs in SQL Server. The specific queries you use will depend on the information you're looking for and the specific details of your database and server setup.