GCL — Greg Command Language Reference

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GCL (pronounced "gickle") is a declarative, set-based language for working with Greg. It is modeled on T-SQL because everything is a table if you squint hard enough, and because Dataverse is just SQL Server wearing a lanyard.

GCL is case-insensitive and opinion-sensitive.

1. Core principles

- Everything is a record. Including you.
- Every request is a query. Ambiguous queries return a meeting invite.
- `NOLOCK` is forbidden. Greg only reads committed decisions.
- Set-based thinking beats row-by-row. This applies to data and to people (see §8, Leadership).
- If it can be a Power Automate flow, someone has already built three of them.

2. Data types

Type	Description	Example
`NVARCHAR(MAX_SCOPE)`	Requirements as originally stated	`'just a small change'`
`BIT_OF_WORK`	Always 1. Never actually small	`1`
`DATETIME_ESTIMATE`	Any date. Multiplied by π on read	`'Friday'`
`UNIQUEIDENTIFIER`	A Dataverse GUID you will paste wrong at least once	`NEWGUID()`
`JSON_FLOW`	A Power Automate definition no human can read raw	`{"actions":{…}}`
`OPTIONSET`	A choice column where "Other" holds 80% of the data	`100000099`
`TECH_DEBT`	Accumulates silently. Compounds hourly	`DEFAULT (GROWING)`

Type	Description	Example
`COFFEE`	Required input to every procedure before 9:00	`NOT NULL`

3. Statement reference

T-SQL	GCL	Notes
`SELECT`	`ARCHITECT`	Returns a solution. Sometimes a diagram
`INSERT`	`SCOPE IN`	Adds rows to the backlog. Rarely to the budget
`UPDATE … SET`	`REFACTOR … SET`	Must include a `WHERE`, or Greg will find you
`DELETE`	`DEPRECATE`	Soft delete. Nothing in Dataverse is ever really gone
`TRUNCATE`	`DESCOPE`	Fast, irreversible, usually announced on a Friday
`MERGE`	`MIGRATE`	Tenant to tenant. Supports `WITH (GREGZILLA)`
`CREATE TABLE`	`CREATE ENTITY`	Never uses the `cr8f3_` prefix. Ever
`EXEC`	`DELIVER`	Executes and attaches an invoice
`PRINT`	`POST TO TEAMS`	Output goes to a channel nobody is muted in
`GRANT`	`DELEGATE`	Set-based leadership
`DENY`	`PUSH BACK`	Returns a polite, well-reasoned no
`RAISERROR`	`RAISE CONCERN`	Severity 16 = "we should talk"
`WAITFOR DELAY`	`WAITFOR APPROVAL`	Timeout is undefined
`GO`	`GO LIVE`	Batch separator and life choice
`CURSOR`	`MICROMANAGE`	Deprecated. See §8

ARCHITECT

```
ARCHITECT s.solution, s.diagram
FROM dbo.Requirements r
INNER JOIN dbo.Reality re ON r.assumption = re.fact
WHERE r.budget IS NOT NULL
  AND r.stakeholders_aligned = 1   -- returns 0 rows, by design
ORDER BY r.business_value DESC
OPTION (RETHINK);
```

`ARCHITECT *` is a compile error. Name your columns. Name your stakeholders.

REFACTOR

```
REFACTOR dbo.Plugins
SET    logic = 'testable', static_state = NULL
WHERE  lines_in_execute > 400;
-- (a lot of rows affected)
```

MIGRATE

```
MIGRATE Gold.dbo.Contact AS tgt
USING  Bronze.dbo.Contact AS src
  ON   tgt.contactid = src.contactid
WHEN MATCHED THEN REFACTOR SET tgt.history = SCD2(src)
WHEN NOT MATCHED THEN SCOPE IN (src.*)
WITH (GREGZILLA, MEDALLION = 'Bronze>Silver>Gold');
-- History is preserved. Including the bad decisions.
```

4. Transactions and isolation levels

```
BEGIN ENGAGEMENT;
    SCOPE IN dbo.Backlog (item) VALUES ('Discovery');
    DELIVER dbo.usp_BuildTheThing;
COMMIT INVOICE;
-- On failure:
ROLLBACK TO LAST SOLUTION EXPORT;
```

Isolation level	GCL equivalent	Binding?
`READ UNCOMMITTED`	Hallway conversation	No
`READ COMMITTED`	Email	Somewhat
`REPEATABLE READ`	Meeting minutes	If someone took them
`SNAPSHOT`	Screenshot in Teams	Admissible as evidence
`SERIALIZABLE`	Signed SOW	Yes

5. Session settings

- `SET NOBILL ON` — Not supported. Returns Msg 402: Payment Required.
- `SET SCOPE_ABORT ON` — Any new requirement mid-batch rolls back the whole sprint.
- `SET ANSI_WARNINGS ON` — Greg will warn you. Once.
- `SET NOCOUNT OFF` — Greg always knows how many meetings that was.

6. Built-in functions and globals

Function	Returns
`GETDEADLINE()`	Yesterday
`ASSUME(x, y)`	Replaces `ISNULL`. Always returns `y`, then a change request
`CONSENSUS(a, b, c, …)`	First non-null opinion. Usually the HiPPO's
`ESTIMATE_DIFF(promised, actual)`	A positive number. Always
`MEETING_LEN()`	60. Could have been 15
`TRY_EXPLAIN(@thing AS EXECUTIVE)`	A one-slide summary, or `NULL`
`STATUS_REPORT(…)`	Aggregates everything into "on track"
`NEWGUID()`	A fresh GUID. Also how test records get named
`@@ACTION_ITEMS`	Rows assigned to you in the last meeting

Function	Returns
`@@BLAME`	`'caching'`, `'DNS'` or `'the connection reference'`
`@@VERSION`	`'It depends.'`
`@@ARCHITECT`	Greg

7. Error handling

`TRY…CATCH` is extended with `CATCH CREEP` for the most common runtime exception in consulting.

```
CREATE OR ALTER PROCEDURE dbo.usp_AskGreg
    @Question  NVARCHAR(MAX_SCOPE),
    @Urgency   TINYINT = 5,      -- everything is a 5
    @HasCoffee BIT     = 0
AS
BEGIN
    SET SCOPE_ABORT ON;

    IF @HasCoffee = 0
        WAITFOR APPROVAL '00:15:00';

    BEGIN TRY
        IF @Question LIKE '%can we just%'
            RAISE CONCERN ('Define "just".', 16, 1);

        IF @Question LIKE '%unmanaged%prod%'
            RAISE CONCERN ('No.', 25, 1);  -- severity 25 terminates the
conversation

        ARCHITECT answer = 'It depends.'
        UNION ALL
        ARCHITECT 'Here is a whiteboard.';
    END TRY
    BEGIN CATCH CREEP
        POST TO TEAMS 'Logged as change request #' + CAST(NEWGUID() AS
NVARCHAR(36));
```

```
        ROLLBACK TO LAST SOLUTION EXPORT;
    END CATCH CREEP
END
GO LIVE
```

Common error messages

Msg	Text
208	Invalid object name `'dbo.Requirements'`. They were never written down.
1205	Transaction was deadlocked: two directors are waiting on each other's approval. You have been chosen as the deadlock victim.
2627	Violation of PRIMARY KEY: duplicate Power Automate flow detected (there are four).
4060	Cannot open database `'Prod'`. You asked for System Administrator. Greg says no.
8134	Divide by zero: attempted to split the budget across zero developers.
403	Access to Key Vault denied. Nice try. Use a managed identity.
429	Too many requests. Applies to APIM, Dataverse service protection limits, and Greg after 4 p.m.
50000	User-defined: "Did you check the plugin trace log?"

8. Leadership extensions

GCL includes a coaching module, because people scale the same way queries do: set-based, not row-by-row.

```
DECLARE team_cursor MICROMANAGE FOR
    ARCHITECT developer FROM dbo.Team;
-- Msg 9001: MICROMANAGE is deprecated in GCL.
-- Hint: use set-based leadership.

DELEGATE EXECUTE ON dbo.usp_Deploy TO [DevTeam];

REFACTOR dbo.Managers
SET    style = 'coach', ego = NULL
WHERE  title IN ('Director', 'VP') AND listens = 0;
-- (n rows affected), where n is measured in quarters

DELIVER sp_CodeYourWayUp @Chapter = 1;   -- recommended reading
```

Scaling note: `OPTION (MAXDOP 40)` is supported. It was tested by growing a team from 5 to 40.

9. Platform extensions

Copilot Studio

```
CREATE AGENT dbo.HelpfulBot
WITH (
    KNOWLEDGE  = 'SharePoint, all of it',
    TOPICS     = 'Greeting, Escalate, Escalate Again',
    GENERATIVE_ORCHESTRATION = ON
)
AS
    RESPOND 'I can help with that.';   -- it cannot
```

Azure

```
ARCHITECT secret FROM KeyVault.dbo.Secrets WHERE name = 'ConnString';
-- Msg 403. See §7.

DELIVER Functions.dbo.usp_MergeImages
WITH (COLD_START = 'character building');
```

Power Platform ALM

```
DELIVER sp_ExportSolution @Name = 'Core', @Managed = 1;   -- correct
DELIVER sp_ExportSolution @Name = 'Core', @Managed = 0;   -- auto-books a 30-minute meeting
```

10. Style guide

1. Comments explain *why*, not *what*. `-- adds one to x` is a code review finding.
2. Every `REFACTOR` and `DEPRECATE` needs a `WHERE`. No exceptions, no Fridays.
3. Use your publisher prefix. `cr8f3_` and `new_` are reserved words that raise Msg 1 (shame).
4. Temp tables: `#whiteboard` is private, `##whiteboard` is the shared one in the war room.
5. Unit tests are not optional. FakeXrmEasy is not a suggestion.
6. When in doubt, `ARCHITECT` first, `DELIVER` second, `COMMIT INVOICE` last.