

# Lab 4: Advanced Rewrites

### Setting up for lab 4

- Restart your SQL Server service (clears all stats)
- 2. Restore your StackOverflow database (Agent job)
- 3. Copy & run the setup script for Lab 4.
- 4. Start SQLQueryStress with QueryLab4.json (or, feeling overwhelmed? Tune mqt\_Lab4\_Level1)

In this one, you may even need sp\_BlitzWho or sp\_WhoIsActive.



#### These aren't too hard to learn:

- Dynamic SQL to solve multi-param search procs
- Pagination to reduce result depth
- SELECT \* tuning to reduce result width
- Advanced CTE filtering to do preprocessing
- Making user-defined functions go inline

(Granted, they're not easy - but they're not terrible.)



## But implementation is slower:

- Reviewing a query & its plan
- Understanding what its problem area is
- Choosing the right tool to fix it
- · Implementing the fix
- Measuring to make sure performance got better

Doing all this for one query can take an hour or more.



### So pick your battles here.

10 minutes - sp\_BlitzCache & query review:

run sp\_BlitzCache, poke around in the top resourceusing queries, look for queries you can tune and make a difference.

45-90 minutes – tune 1 query: run it, get the actual plan (if possible), change the query/indexes/stats, get the new actual plan (if possible).

5 minutes - homework: report your work in Slack.

