Add Constraints for Performance

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Constraints Are Slow!

- CHECK (col1 > 7)
  - Checking is slower than not checking
- UNIQUE (col1)
  - May have to block waiting for other transactions to complete
- Foreign Keys
  - Have to do lookups in other tables

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But Only When Writing

- Constraints only penalize writes
  - Usually an incremental slowdown, adding overhead to INSERTs and UPDATEs
    - Except in cases of high contention
- Constraints don't penalize reads
- So can they help reads?

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Yes!

- CHECK (col1 > 7)
- SELECT * FROM foo WHERE col1 = 3;
- No need to read table at all!
  - Obviously nothing will match, because of CHECK constraint
- Requires constraint_exclusion = on

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But Could Be Better

- `CREATE TABLE t(i INT UNIQUE);`
- `SELECT DISTINCT * FROM t;`
- Still performs a sort or index scan
  - Not necessary at all

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