

Q11

A surrogate key is an artificially generated key. It is used when the data has no natural key for unique identification. While the business key is generated in the source system of the data, a surrogate key has no relationship to the source system and is generated e.g. by the ETL process.

Benefits:

- Stable and does not change over time, business key might change over time
- Essential for implementing SCDs. They allow differentiation between multiple historical versions of a record while maintaining a unique identifier for each
- Numeric, small in size (e.g., integers), business keys can be large and complex (e.g. composite keys)
- Ensures uniqueness within the database, business keys may not be unique across all systems