# DB03 Requirements

What are the Codd's 12 Relational Database Rules? what are the advantages and disadvantages of the Codd's Rules?

Please share your idea with the group with a minimum of 250 words.

In the ensuing table I paraphrased some of the descriptions. Furthermore, it was noted that (Coronel & Morris, 2018, p. 100) even dominant vendors like Microsoft and Oracle do not fully support all 12 rules. Therefore, it should be used as a set of guidelines for what the software aims to accomplish and what the Database Architect strives to achieve.

Dr Codds 12 Relational database Rules are:

|  |  |  |
| --- | --- | --- |
| Rule | Rule Name | Description |
| 1 | Information | Everything must be in a table in columns and rows |
| 2 | Guaranteed Access | Everything is accessible through a combination of table name, PK\_KEY, column name |
| 3 | Systematic treatment of Nulls | NULLs must be treated the same across the entire database |
| 4 | Dynamic online catalog based on the relational model | The metadata must be stored as ordinary data accessible through standard relational database language to the authorized users |
| 5 | Comprehensive data sublanguage | The relational db may support many languages but it must support DDL, VDL, DML, integrity constraints, authorization, and transaction management |
| 6 | View updating | Views must be updateable through the system if they can be updated |
| 7 | High level insert, update and delete | The db must support set inserts, updates and deletes |
| 8 | Physical data independence | If the physical access methods are moved the logical structures are unchanged |
| 9 | Logical data independence | Application programs are unaffected when changes are made to the structure of tables by adding or deleting or moving rows and columns |
| 10 | Integrity independence | All relational constraints must be definable at the relational language |
| 11 | Distribution independence | Data location doesn’t affect end user whether they are local or distributed (sharding) |
| 12 | Nonsubversion | Must not allow backdoors through low level access thereby subverting the security of the db |
| 13 | Rule Zero | A db must use its relational facilities exclusively for management |

Table 1. (Coronel & Morris, 2018, p. 101)

# References

Coronel, C., & Morris, S. (2018). *Database systems: Design, implementation, & management* (13th ed.). Cengage Learning.