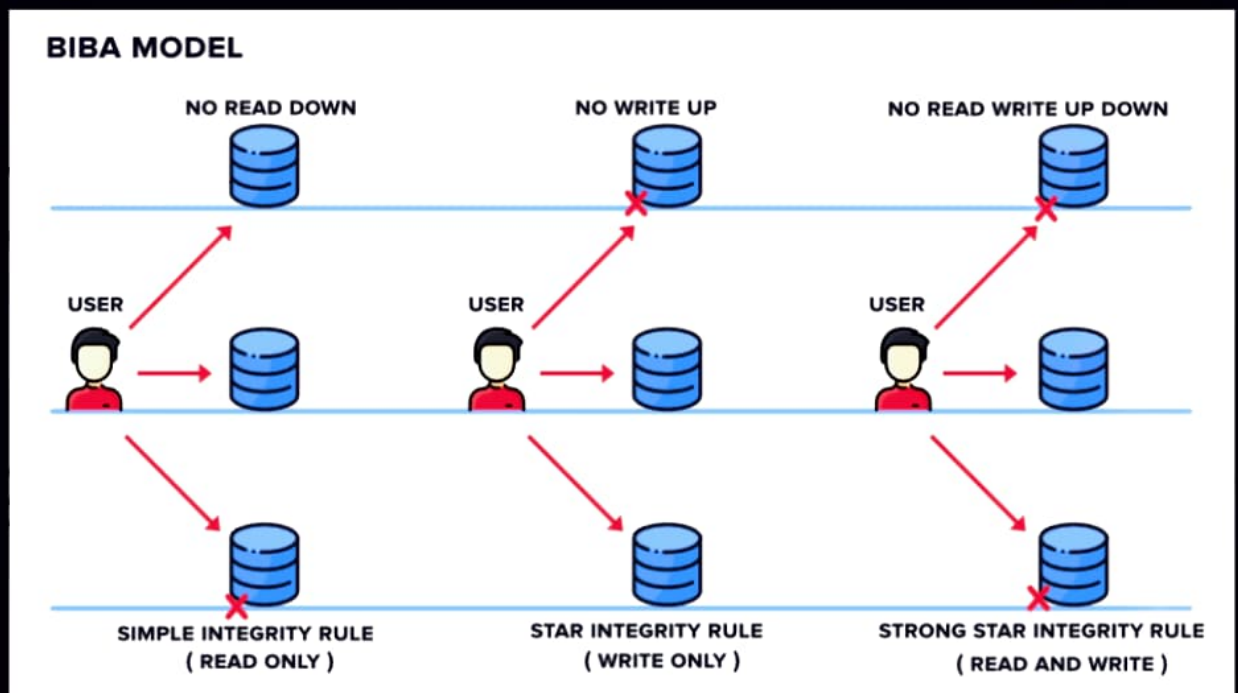


2. Biba

This Model was invented by Scientist **Kenneth .J. Biba**. Thus this model is called Biba Model. This is used to maintain the **Integrity** of Security. Here, the classification of Subjects(Users) and Objects(Files) are organized in a non-discretionary fashion, with respect to different layers of secrecy. This works the exact reverse of the Bell-LaPadula Model.

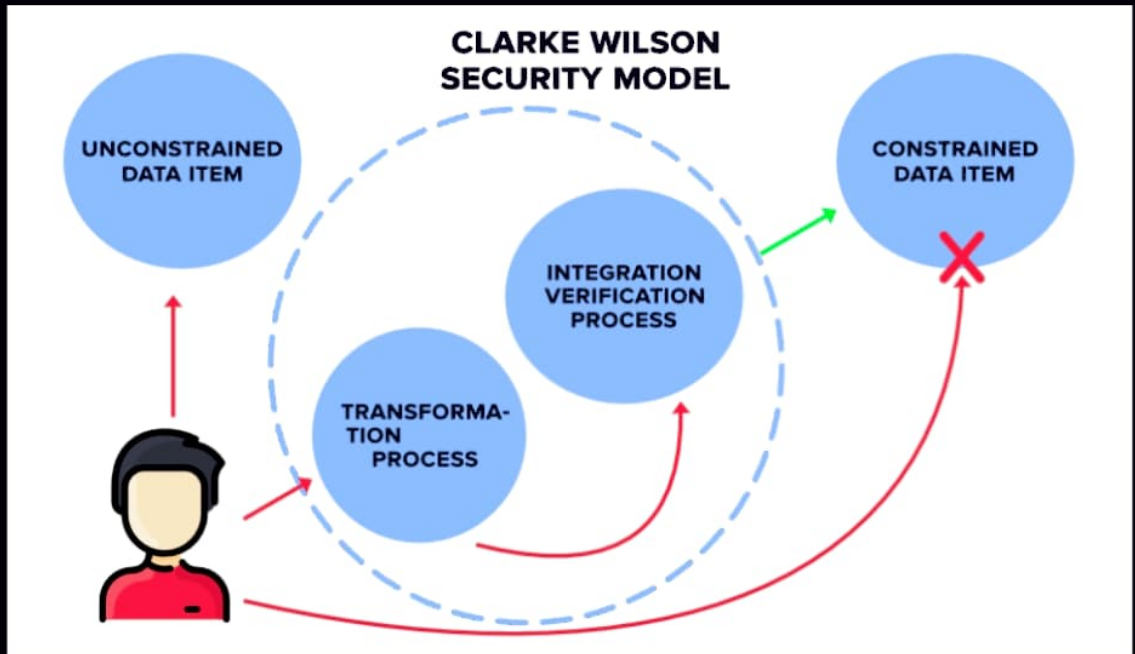


It has mainly 3 Rules:

- **SIMPLE INTEGRITY RULE:** Simple Integrity Rule states that the Subject can only **Read** the files on the Same Layer of Secrecy and the Upper Layer of Secrecy but not the Lower Layer of Secrecy, due to which we call this rule as **NO READ DOWN**
- **STAR INTEGRITY RULE:** Star Integrity Rule states that the Subject can only **Write** the files on the Same Layer of Secrecy and the Lower Layer of Secrecy but not the Upper Layer of Secrecy, due to which we call this rule as **NO WRITE-UP**
- **STRONG STAR INTEGRITY RULE**

3. Clarke Wilson Security Model

This Model is a highly secured model. It has the following entities.



- **SUBJECT:** It is any user who is requesting for Data Items.
- **CONSTRAINED DATA ITEMS:** It cannot be accessed directly by the Subject. These need to be accessed via **Clarke Wilson Security Model**
- **UNCONSTRAINED DATA ITEMS:** It can be accessed directly by the Subject.

The Components of Clarke Wilson Security Model

- **TRANSFORMATION PROCESS:** Here, the Subject's request to access the Constrained Data Items is handled by the Transformation process which then converts it into permissions and then forwards it to Integration Verification Process
- **INTEGRATION VERIFICATION PROCESS:** The Integration Verification Process will perform **Authentication** and **Authorization**. If that is successful, then the Subject is given access to Constrained Data Items.



The Lipner Integrity Model, often associated with Dr. Stanley J. Lipner, is a framework used to assess and understand an individual's integrity in professional settings, particularly in the context of medical practice. This model focuses on four key components:

1. **Honesty:** This dimension evaluates a person's truthfulness and sincerity in their actions and communications.
2. **Reliability:** Reliability refers to an individual's consistency in fulfilling commitments and responsibilities.
3. **Respectfulness:** This aspect assesses how an individual treats others, including colleagues, patients, and other stakeholders, with respect and dignity.
4. **Fairness:** Fairness involves treating individuals impartially, without bias or discrimination.

The Lipner Integrity Model is often used in the evaluation of healthcare professionals, such as physicians, to ensure they demonstrate the highest standards of integrity in their practice. It serves as a guide for assessing and nurturing ethical behavior in the medical field.