**Difference between Database System and Data Warehouse –**

**Database**

1. **Used for Online Transactional Processing (OLTP) but can be used for other purposes such as Data Warehousing. This records the data from the user for history.**
2. **The tables and joins are complex since they are normalized (for RDMS). This is done to reduce redundant data and to save storage space.**
3. **Entity – Relational modelling techniques are used for RDMS database design.**
4. **Optimized for write operation.**
5. **Performance is low for analysis queries.**

**Data Warehouse**

1. **Used for Online Analytical Processing (OLAP). This reads the historical data for the Users for business decisions.**
2. **The Tables and joins are simple since they are de-normalized. This is done to reduce the response time for analytical queries.**
3. **Data – Modelling techniques are used for the Data Warehouse design.**
4. **Optimized for read operations.**
5. **High performance for analytical queries.**
6. **Is usually a Database.**

**It's important to note as well that Data Warehouses could be sourced from zero to many databases.**

***Database:***

***Used for Online Transactional Processing (OLTP).***

* **Transaction-oriented.**
* **Application oriented.**
* **Current data.**
* **Detailed data.**
* **Scalable data.**
* **Many Users, Administrators / Operational.**
* **Execution time: short.**

***Data Warehouse:***

***Used for Online Analytical Processing (OLAP).***

* **Oriented analysis.**
* **Subject oriented.**
* **Historical data.**
* **Aggregated data.**
* **Static data.**
* **Not many users, manager.**
* **Execution time: long.**

**Database Use Cases**

**Database use cases are related to the day-to-day transactional requirements in an organization. Some examples of database applications include:**

* **An airline using an online booking system**
* **A hospital registering a patient**
* **A bank adding an ATM withdrawal transaction to an account**
* **A website creating an order for a product it has sold**

**Data Warehouse Use Cases**

**Data warehouse use cases focus on providing high-level reporting and analysis that lead to more informed business decisions. Use cases include:**

* **Carrying out data mining to gain new insights from the information held in many large databases**
* **Conducting market research by analyzing large volumes of data in-depth**
* **An online business analyzing user behavior to make business decisions**