**Assignment 6: Gridfile in Data Warehouses**

**1. What is a Gridfile?**

A **Gridfile** is a **multidimensional index structure** that

efficiently organizes and retrieves data based on multiple dimensions.

It combines:

* **Key transformation techniques** (similar to Hashing)
* **Index file techniques** (similar to Tree-based approaches)

**2. How is a Gridfile Created?**

The Gridfile is built using **dimensional partitioning**, where the data space is divided into **grid cells** (multi-dimensional regions). The steps to create a Gridfile are:

1. **Define Dimensions**: Identify the attributes used for indexing.
2. **Partition Each Dimension**: Split the attribute values into **intervals** (scales).
3. **Create a Grid Directory**: Construct a **grid directory** with cells that map to **data pages**.
4. **Assign Data to Grid Cells**: Each record is assigned to a grid cell based on its dimensional values.
5. **Handle Overflow**: If a grid cell overflows, new partitions are created dynamically.

