Guide to Managing Databases and Tables in Hive

This guide reflects the step-by-step process of creating, managing, and querying databases and tables in Hive, including database creation, partitioning, table types, and data loading operations. It provides a clear and structured introduction to Hive database and table management tasks.

Create Database Statement:

```
hive> CREATE DATABASE IF NOT EXISTS Student;
```

Verify the Databases List:

```
hive> SHOW DATABASES;
default
Student
```

To use The Database:

```
hive> use Student;
```

To See the Database Location:

```
hive> DESCRIBE DATABASE EXTENDED student;
```

Hive Table Types

Internal or Managed table: You can drop the table with underlying data.

External table: You can drop an external table, only table metadata from Metastore will be removed but the underlying files will not be removed and still they can be accessed via HDFS commands, Spark or any other Hadoop compatible tools.

Temporary table: For temporary purpose.

Transactional Table: For transactional data purpose.

Table Creation

```
hive> CREATE External TABLE IF NOT EXISTS Student.Info(Id int,Name string,
      Age int)
    > PARTITIONED BY (Gender string)
    > ROW FORMAT DELIMITED
    > FIELDS TERMINATED BY ','
    > STORED AS TEXTFILE
    > LOCATION '/data/output/';
```

To See the Table Structure:

```
hive> DESCRIBE student.info;
```

Insert Data (single record) into Table:

```
hive> INSERT INTO student.info PARTITION(Gender=’M’) values(7,'Maruf',23);
hive> INSERT INTO student.info PARTITION(Gender=’F’) values(8,'Rina',50);
```

For Bulk Data (multiple record) Load:

```
hive> LOAD DATA INPATH '/samrat/data.txt' INTO TABLE Student.Info
      PARTITION(Gender=’F’);
hive> LOAD DATA INPATH '/path/to/HDFS/dir/file.csv' OVERWRITE INTO
      TABLE Student.Info PARTITION (Gender='M');
hive> LOAD DATA INPATH '/path/to/HDFS/dir/file.csv' OVERWRITE INTO
      TABLE Student.Info PARTITION (Gender='F');
```

To Retrieves the all data:

```
hive> SELECT * FROM Info;
```

Conditional Data Retrieve:

```
hive> SELECT * FROM Info WHERE age=23;
```

To See All Partitions:

```
hive> USE student;
hive> show partitions Info;
```

To Drop a Partition:

```
hive>ALTER TABLE Student.Info DROP PARTITION (gender="F");
```

To Repair a Partition:

```
hive> Msck repair table Student.Info;
```