

HIVEQL - SELECT-WHERE

http://www.tutorialspoint.com/hive/hiveql_select_where.htm

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The Hive Query Language *HiveQL* is a query language for Hive to process and analyze structured data in a Metastore. This chapter explains how to use the SELECT statement with WHERE clause.

SELECT statement is used to retrieve the data from a table. WHERE clause works similar to a condition. It filters the data using the condition and gives you a finite result. The built-in operators and functions generate an expression, which fulfils the condition.

Syntax

Given below is the syntax of the SELECT query:

```
SELECT [ALL | DISTINCT] select_expr, select_expr, ...
FROM table_reference
[WHERE where_condition]
[GROUP BY col_list]
[HAVING having_condition]
[CLUSTER BY col_list | [DISTRIBUTE BY col_list] [SORT BY col_list]]
[LIMIT number];
```

Example

Let us take an example for SELECT...WHERE clause. Assume we have the employee table as given below, with fields named Id, Name, Salary, Designation, and Dept. Generate a query to retrieve the employee details who earn a salary of more than Rs 30000.

ID	Name	Salary	Designation	Dept
1201	Gopal	45000	Technical manager	TP
1202	Manisha	45000	Proofreader	PR
1203	Masthanvali	40000	Technical writer	TP
1204	Krian	40000	Hr Admin	HR
1205	Kranthi	30000	Op Admin	Admin

The following query retrieves the employee details using the above scenario:

```
hive> SELECT * FROM employee WHERE salary>30000;
```

On successful execution of the query, you get to see the following response:

ID	Name	Salary	Designation	Dept
1201	Gopal	45000	Technical manager	TP
1202	Manisha	45000	Proofreader	PR
1203	Masthanvali	40000	Technical writer	TP
1204	Krian	40000	Hr Admin	HR

JDBC Program

The JDBC program to apply where clause for the given example is as follows.

```
import java.sql.SQLException;
import java.sql.Connection;
import java.sql.ResultSet;
import java.sql.Statement;
import java.sql.DriverManager;
```

```

public class HiveQLWhere {
    private static String driverName = "org.apache.hadoop.hive.jdbc.HiveDriver";

    public static void main(String[] args) throws SQLException {

        // Register driver and create driver instance
        Class.forName(driverName);

        // get connection
        Connection con = DriverManager.getConnection("jdbc:hive://localhost:10000/userdb",
"", "");

        // create statement
        Statement stmt = con.createStatement();

        // execute statement
        ResultSet res = stmt.executeQuery("SELECT * FROM employee WHERE salary>30000;");

        System.out.println("Result:");
        System.out.println(" ID \t Name \t Salary \t Designation \t Dept ");

        while (res.next()) {
            System.out.println(res.getInt(1) + " " + res.getString(2) + " " +
res.getDouble(3) + " " + res.getString(4) + " " + res.getString(5));
        }
        con.close();
    }
}

```

Save the program in a file named HiveQLWhere.java. Use the following commands to compile and execute this program.

```

$ javac HiveQLWhere.java
$ java HiveQLWhere

```

Output:

ID	Name	Salary	Designation	Dept
1201	Gopal	45000	Technical manager	TP
1202	Manisha	45000	Proofreader	PR
1203	Masthanvali	40000	Technical writer	TP
1204	Krishan	40000	Hr Admin	HR

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