

## Hive UDF

**Create a HIVE UDF that returns the string in reverse order.**

**Write the Java UDF**

**T1**

**gedit ReverseStringUDF.java**

```
package com.example.hive.udf;

import org.apache.hadoop.hive.ql.exec.UDF;

public class ReverseStringUDF extends UDF {
    public String evaluate(String input) {
        if (input == null) {
            return null;
        }
        return new StringBuilder(input).reverse().toString();
    }
}
```

**Compile and Package into JAR**

**mkdir -p ~/hiveudf/classes**

**javac -cp "/usr/lib/hive/lib/\*" -d ~/hiveudf/classes ReverseStringUDF.java**

**jar -cvf ~/hiveudf/reverse-udf.jar -C ~/hiveudf/classes .**

**added manifest**

**adding: com/(in = 0) (out= 0)(stored 0%)**

**adding: com/example/(in = 0) (out= 0)(stored 0%)**

**adding: com/example/hive/(in = 0) (out= 0)(stored 0%)**

**adding: com/example/hive/udf/(in = 0) (out= 0)(stored 0%)**

**adding: com/example/hive/udf/ReverseStringUDF.class(in = 546) (out= 344)(deflated 36%)**

**Put the JAR in HDFS**

**hdfs dfs -mkdir -p /user/hive/udfs**

**hdfs dfs -put -f ~/hiveudf/reverse-udf.jar /user/hive/udfs/**

**Register the UDF in Hive**

**T2**

**hive> ADD JAR hdfs:///user/hive/udfs/reverse-udf.jar;**

**converting to local hdfs:///user/hive/udfs/reverse-udf.jar**

Added [/tmp/837c701a-150d-4789-9dd0-a4de454d3004\_resources/reverse-udf.jar] to class path  
Added resources: [hdfs:///user/hive/udfs/reverse-udf.jar]

```
CREATE TEMPORARY FUNCTION reverse_str AS  
'com.example.hive.udf.ReverseStringUDF';
```

OK

Time taken: 0.572 seconds

### Test the UDF

```
hive> SELECT reverse_str('Big Data Analytics') AS reversed;
```

OK

scitylanA ataD giB

Time taken: 0.104 seconds, Fetched: 1 row(s)

### Use reverse\_str() UDF in students table

#### Create student Table

```
hive> CREATE TABLE students (  
    id INT,  
    name STRING,  
    marks INT  
);
```

#### Insert Data

```
hive> INSERT INTO students VALUES (1, 'John', 85), (2, 'Alice', 90), (3, 'Bob', 90);
```

#### Retrieve table data

```
hive> Select * from students;
```

1	John	85
2	Alice	90
3	Bob	90

```
hive> SELECT id, name, reverse_str(name) AS reversed_name FROM students;
```

OK

1	John	nhoJ
2	Alice	ecilA
3	Bob	boB

Time taken: 0.176 seconds, Fetched: 3 row(s)