



Explode & Lateral View

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User Defined Table Generating Function

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Create a table with an array column

use trendytech;

create table author_details(author_name string, book_names array<string>) row format delimited fields terminated by ',' collection items terminated by ":" ;

```
[cloudera@quickstart Downloads]$ gedit authors.csv  
[cloudera@quickstart Downloads]$ cat authors.csv  
Salman Rushdie,Grimus:Shame:Fury  
Thomas Otway,Don Carlos:The Orphan  
Ben Jonson,Volpone:Epicene  
John Milton,Arcades:Comus  
[cloudera@quickstart Downloads]$ █
```

load data local inpath '/home/cloudera/Downloads/authors.csv' into table author_details;

select * from author_details;



Screenshot of previous commands

```
hive> use trendytech;
OK
Time taken: 0.015 seconds
hive> create table author_details(author_name string, book_names array<string>) row
format delimited fields terminated by ',' collection items terminated by ':';
OK
Time taken: 0.205 seconds
hive> load data local inpath '/home/cloudera/Downloads/authors.csv' into table auth
or_details;
Loading data to table trendytech.author_details
Table trendytech.author_details stats: [numFiles=1, totalSize=121]
OK
Time taken: 0.423 seconds
hive> select * from author_details;
OK
Salman Rushdie      ["Grimus","Shame","Fury"]
Thomas Otway        ["Don Carlos","The Orphan"]
Ben Jonson           ["Volpone","Epicene"]
John Milton          ["Arcades","Comus"]
Time taken: 0.057 seconds, Fetched: 4 row(s)
hive> █
```



Use explode on array column type

```
describe author_details;
```

```
select explode(book_names) from author_details;
```

```
hive> describe author_details;
OK
author_name      string
book_names       array<string>
Time taken: 0.076 seconds, Fetched: 2 row(s)
hive> select explode(book_names) from author_details;
OK
Grimus
Shame
Fury
Don Carlos
The Orphan
Volpone
Epicene
Arcades
Comus
Time taken: 0.054 seconds, Fetched: 9 row(s)
hive> █
```



Try selecting other columns with exploded ones

`select author_name, explode(book_names) from author_details;` **(note: this will error out)**

```
hive> describe author_details;
OK
author_name          string
book_names           array<string>
Time taken: 0.069 seconds, Fetched: 2 row(s)
hive> select author_name, explode(book_names) from author_details;
FAILED: SemanticException [Error 10081]: UDTF's are not supported outside the SELEC
T clause, nor nested in expressions
hive> █
```



Then what's the solution?

Answer: we need to use a lateral view. The exploded column should be made as virtual table and should be joined with actual table.

**select author_name, b_name from author_details lateral view
explode(book_names) book_table as b_name;**

```
hive> describe author_details;
OK
author_name      string
book_names       array<string>
Time taken: 0.071 seconds, Fetched: 2 row(s)
hive> select author_name, b_name from author_details lateral view explode(book_name
s) book_table as b_name;
OK
Salman Rushdie  Grimus
Salman Rushdie  Shame
Salman Rushdie  Fury
Thomas Otway    Don Carlos
Thomas Otway    The Orphan
Ben Jonson       Volpone
Ben Jonson       Epicene
John Milton      Arcades
John Milton      Comus
Time taken: 0.053 seconds, Fetched: 9 row(s)
hive> █
```



We have learnt explode & lateral View

Happy Learning!!!



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