

In spark python shell type the commands to achieve following

- a) Find the size of spark dataset i.e an RDD, called foo :
- ```
import org.apache.spark.util.SizeEstimator
value foo = sc.textFile (file) → print (SizeEstimator.estimate(foo))
```

- b) Create an RDD called nums from the list of all single digit

Odd numbers .

```
val nums = sc.parallelize ([1,3,5,7,9])
```

- c) Find the sum of all values in nums, the RDD created above .

```
val sumt = sum(nums)
```

- d) Display all values from nums that are less than 6

```
RDD.foreach (nums < 6)
```

- e) Find the triple of each value from nums in a new RDD called

```
triples num2 = RDD.map (nums ← nums * 3)
```

```
triples = nums.map (lambda x: 3 * x).collect
```

- f) create RDD called logs from the file 'messages.data'

```
val logs = sc.textFile ("path/messages.data")
```

- g) Display first message from logs .

```
message = logs.filter (lambda line: "message" in line) (print (message.first))
```

- h) Store the length of each error message from logs, in an RDD

called errors . Note that to length of string or a collection

in python we can use len() :

```
→ val errors = lines.map (lambda logs: length(logs))
```

- i) Find total length of all error messages.

```
→ val length = errors.count()
```

- j) Ask spark to persist logs in memory

```
→ lines.persist()
```

Q. Delimiters .

Q. five engine clause

Q. Spark is mutual or immutable.

Q. How to display welcome to hadoop using delimiters spaces

Q. chap. 3 - Text file encoding of data values

use database ;  
 show tables ;  
 show databases ;  
 delete database FORCE command if database is not empty  
 drop table if exists

| File 1. txt        | File 2. txt   | File 3. txt         |
|--------------------|---------------|---------------------|
| Big data<br>hadoop | spark<br>hive | Mapreduce<br>hbase. |

| value   | a | b |
|---------|---|---|
| Bigdata | 0 | 0 |
| hadoop  | 0 | 0 |
| spark   | 0 | 1 |
| hive    | 0 | 1 |
| MR      | 1 | 0 |
| hbase   | 1 | 0 |

create table (value, string)  
 partitions (a int, b int)

Spark → pyspark

→ size of RDD

→ total sum from RDD

Q. Manageable tables & external table (Imp)

Q. Hive commands.

show databases;

show table.

Drop table

alter table

create table

- f → hive -f script.q (non interactive running script)
- e → hive -e 'select \* from dummy' (non query in interactive mode)
- s → hive -s 'select \* from dummy' (suppress the messages using set HIVE\_LOG\_LEVEL=ERROR)

Q. To enter spark command → pyspark  
 scala command → spark shell

Q. Textfile encoding of data values

Q. How do display "welcome to hadoop" using space with delimiters.

```
lines = sc.parallelize(['Welcome\nd' to '\nd' hadoop'])
print(lines);
```

Q. Why do you use transformations to actions on spark.

→ A fn that produces new RDD from existing RDD's but when we want to work with actual dataset @ that point action is performed when action is triggered after the result new RDD is not found like transformations.

Q. Why do we use partitions.

Q. MAP & Flat Map.

Map →



Q. What do you mean by position in spark?

1. Embedded db allows only a single user to connect to metastore. For multiple users, we must consider other db.
2. Example of hive services are metastore, hiveserver and cliservice, jar.
3. In hive console, the command !pwd print the current working.
4. ~~In hive console~~ when loading files into table in hive using LOAD DATA the keyword LOCAL indicates that the file is in the local file system.
5. In future to prevent hive from deleting table data when we drop the table, we create the table using the keyword EXTERNAL in the CREATE TABLE statement.
6. The default path to the warehouse in hive is user/hive/warehouse.
7. MR, spark & TEZ can be used as execution engines in hive.
8. LOCATION clause can be used to override the default path of where we create tables and database in HIVE.
9. There are three modes for running metastore in hive embedded, local, & remote.
10. spark & structured data, spark streaming & machine (PI-ck) are some spark high level components.
11. In spark driver program spark context object represents a connection to a spark computing cluster.

notation in spark?

- f → hive -f script.q (non interactive running scripts)
- e → hive -e 'select \* from dummy' (non query in interactive mode)
- s → hive -s 'select \* from dummy' (suppress the messages using option)

Q. To enter spark command → pyspark  
scala command → spark shell.

Q. Textfile encoding of data values

Q. How do display "welcome to hadoop" using space with delimiters.

```
lines = sc.parallelize(['Welcome\nd' to '\nd' hadoop'])
println(lines);
```

Q. why do you use transformations to actions on spark.

→ A fn that produces new RDD from existing RDD's but when we want to work with actual dataset @ that point action is performed when action is triggered after the result new RDD is not found like transformations.

Q. why do we use partitions.

Q. MAP & Flat Map.

map →

Q. why do we use partition in spark?

Q. what is lazy evaluation.

Q. Diff schema on read & schema write . . . . .

Ans -> schema read.

~~Q. Embedded.~~

~~Q. cu, hiveserver2, beeline, hwi, jar, metastore~~

~~Q. prod~~

Q. Ans for 1st page question.

d) for ( $i \leftarrow -1$  to 10 if  $num[i] < 6$ )

{  $a[i] = num[i]$  }

e) for ( $t \leftarrow a$ ) {  $tuple[i] = 3 * a[i]$  }  
     $println(a[i])$  }

f)  $val logs = sc.textFile("path/messages.data")$

g)  $mes = lines.filter(lambda line: "message" in line)$

h)  $val len = lines.map(lambda logs: length(logs))$

i)  $val length = error.count()$

j)  $lines.persist()$ .