

## Spark Lesson 2

5 questions

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1.

How can you create an RDD? Mark all that apply

- ☒ Reading from HDFS
  - ☒ Apply a transformation to an existing RDD
  - ☐ Calling collect() on an existing RDD
  - ☒ Reading from a local file available both on the driver and on the workers
- 

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2.

How does Spark make RDDs resilient in case a partition is lost?

- ☒ Tracks the history of each partition and reruns what is needed to restore it
  - ☐ By default keeps multiple copies in memory on the same node
  - ☐ By default keeps multiple copies in memory across different nodes
  - ☐ Tracks the history of each partition and reads it back from disk
- 

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3.

Which of the following sentences about flatMap and map are true?

- ☒ flatMap accepts a function that returns multiple elements, those elements are then flattened out into a continuous RDD.
- ☒ map transforms elements with a 1 to 1 relationship, 1 input - 1 output
- ☐ any flatMap transforms each input element in the same number of X output elements, so the size of the output RDD is X times the size of the input RDD

☐ if you use flatMap with this function:



```
1 def my_func(a):  
2   return [a, a+1]  
3
```

on a RDD that contains only the numbers 2 and 8, and collect the output RDD to the Driver, the output would be:

```
1 [[2, 3], [8, 9]]
```

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4.

Check all wide transformations

- ☐ shuffle
- ☐ repartition
- ☐ flatMap
- ☐ groupByKey
- ☐ reduceByKey

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5.

Check all true statements about shuffle

- ☐ groupByKey and reduceByKey have similar performance because both trigger a shuffle
- ☐ A shuffle operation always works in memory
- ☐ Repartition, even if it triggers a shuffle, can improve performance of your pipeline by balancing the data distribution after a heavy filtering operation



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