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Spark DataFrame column as a List (Scala/Java Collection), there are

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(https://sparkbyexamples.com/questions/ultiple ways to convert this, I will explain most of them with examples. Remember that when you use

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Collection list.

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I will also cover how to extract the Spark DataFrame column as list with out duplicates.

Let's Create a Spark DataFrame

```
val data = Seq(("James", "Smith",
   ("Robert", "Williams", "USA", "
val columns = Seq("firstname","]
import spark.implicits.
val df = data.toDF(columns: *)
df.show()
//+-------
//|firstname|lastname|country|st
//+----+--
//|
             Smith|
                     USA
     James
//| Michael|
                     USA
             Rose
//| Robert|Williams|
                     USA
//|
    Maria
             Jones|
                     USA
//+------
```

From above data. I will extract the state values as a List.

Example 1 - Spark

Convert DataFrame

Column to List

(https://sparkbyexamples.com/give you the loss experience on your website. In South the loss experience on your website. In South the loss experience on your website. It is not continue to use this site we will assume that you are happy with Column to List, first itselect() the

column you want, next use the Spark map() transformation

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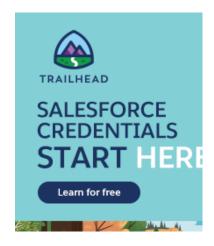
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(https://sparkbyexamples.com/spark/spar k-map-vs-mappartitions-transformation/) to convert the Row to String, finally collect() the data to the driver (https://sparkbyexamples.com/spark/spar k-dataframe-collect/) which returns an Array[String].



Among all examples explained here this is best approach and performs better with small or large datasets.

```
val listValues=df.select("state"
                 .collect.toList
println(listValues)
//List(CA, NY, CA, FL)
```

The above examples extract all values from a DataFrame column as a List including duplicate values. If you wanted to remove the duplicates, use distinct.

```
println(listValues.distinct)
//List(CA, NY, FL)
```

The better option would be running distinct() on Spark DataFrame (https://sparkbyexamples.com/spark/spar k-remove-duplicate-rows/) before

(With the spaking the samples of the confecting as this transfer of the same that you are happy with many values in a list, this performs better. Accept

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spark/spark-map-vsmappartitions-transformation/) val dis=df.select("state").disti .collect().toList println(dis) //List(CA, NY, FL)

Example 2 - Using Typed **Dataset to Extract** Column List

If you are using Dataset, use the below approach, since we are using Typed String encoders we don't have to use map() transformation

```
val ex3=df.select('state').as[St
          .collect.toList
println(ex3)
//List(CA, NY, CA, FL)
```

Example 3 - Using RDD to Get Column List

In this example, I have used RDD to get Column List and used RDD map() transformation to extract the column we want. RDD collect() action returns Array[Any] . This actually performs better and it is the preferred approach if you are using RDD's or PySpark DataFrame

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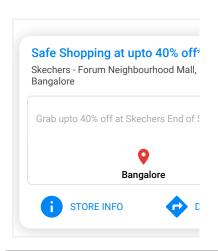
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Example 4 - Uset collectAsList() to Get Column List

Spark also provides collectAsList() action to collect the DataFrame Columns as a java.util.List[Row], If you are using Java this is the way to go.

```
val ex2=df.select("state").map(f
          .collectAsList
println(ex2)
//List(CA, NY, CA, FL)
```

Example 5 - Other **Alternatives to Convert** Column to List

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```
df.select("state").collect.map(f
```

Conclusion

In this article, I have provided many examples of how to extract/convert the Spark DataFrame column as a list with or with out duplicates.

Happy Learning !!

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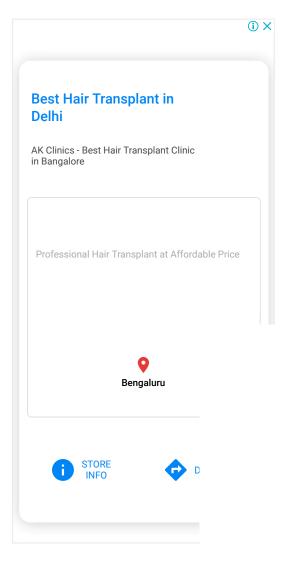
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