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spark-tutorial/)

tutorial/)

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packages)

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installation)

substring() from a tutorial/) column

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### **PySpark DataFrame**

PySpark - Create a DataFrame (https://sparkbyexamples.com/py

ark/spark-web-ui-understanding/) FAQ's In Prosparks all lebs websattniphed of unsticant is questions/) used to extract the substring from a DataFrame string column by providing the (https://sparkbyexamples.com/py More positionsing pending from strang you wanted to extract.

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In this tutorial, I have explained with an example of getting substring of a column using substring() from pyspark.sql.functions and using substr() from pyspark.sql.Column type.

## **Using SQL function** substring()

<u>spark/different-ways-to-create-dataframe-in-pyspark/)</u>

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<u>PySpark – orderBy() and sort()</u> (https://sparkbyexamples.com/py Using the substring() function of pyspark.sql.functions module we can extract a substring or slice of a string from the DataFrame column by providing the position and length of the string you wanted to slice.

```
substring(str, pos, len)
```

Note: Please note that the position is not zero based, but 1 based index.

Below is an example of Pyspark substring() using withColumn() (https://sparkbyexamples.com/pyspark/pyspark-withcolumn/).



```
data = [(1,"20200828"),(2,"20180525
columns=["id","date"]
df=spark.createDataFrame(data,colum
df.withColumn('year', substring('da', withColumn('month', substring('da', withColumn('day', substring('day', su
```

In above example, we have created a DataFrame with two columns, id and date. Here date is in the form "year month day". HereI have used substring() on date column to return sub strings of date as year, month, day respectively. Below is the output.

```
+--+---+
|id |date |year|month|day|
+--+---+
|1 |20200828|2020|08 |28 |
|2 |20180525|2018|05 |25 |
+--+---+
```



<u>spark/pyspark-orderby-and-sort-explained/)</u>

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spark/pyspark-loop-iteratethrough-rows-in-dataframe/#useforeach-loop-through-dataframe)

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<u>PySpark – fillna() & fill()</u> (https://sparkbyexamples.com/py spark/pyspark-fillna-fill-replacenull-values/)</u>

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PySpark – ArrayType Column
(Array)
(https://sparkbyexamples.com/py
spark/pyspark-arraytype-column-with-examples/)

# Using substring() with select()

In Pyspark we can get substring() of a column using <u>select</u> (https://sparkbyexamples.com/pyspark/sele ct-columns-from-pyspark-dataframe/).

Above example can bed written as below.

# 3.Using substring() with selectExpr()

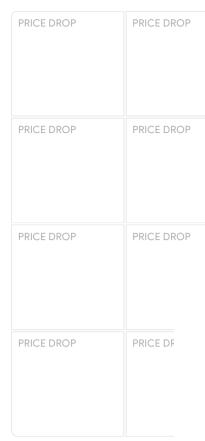
Sample example using **selectExpr** to get sub string of column(date) as year,month,day. Below is the code that gives same output as above.

# Using substr() fromColumn type

Below is the example of getting substring using substr() function from pyspark.sql.Column type in Pyspark.

```
df3=df.withColumn('year', col('date').s
   .withColumn('month',col('date').s
   .withColumn('day', col('date').s)
```

The above example gives output same as the above mentioned examples.



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<u>PySpark – MapType (Map/Dict)</u> (https://sparkbyexamples.com/py spark/pyspark-maptype-dictexamples/)</u>

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<u>PySpark – Window Functions</u> (https://sparkbyexamples.com/pyspark/pyspark-window-functions/)

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Functions
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<u>PySpark – JSON Functions</u> (https://sparkbyexamples.com/pyspark/pyspark-json-functions-with-examples/)</u>

### **PySpark Datasources**

<u>PySpark</u> – Read & Write CSV File (https://sparkbyexamples.com/pyspark/pyspark-read-csv-file-into-dataframe/)

<u>PySpark – Read & Write Parquet</u> File

(https://sparkbyexamples.com/py spark/pyspark-read-and-writeparquet-file/)

<u>PySpark – Read & Write JSON</u> <u>file</u>

(https://sparkbyexamples.com/py spark/pyspark-read-json-file-intodataframe/)

# PySpark Built-In Functions

<u>PySpark – when()</u>
(https://sparkbyexamples.com/pyspark/pyspark-when-otherwise/)</u>

<u>PySpark - expr()</u> (https://sparkbyexamples.com/pyspark/pyspark-sql-expr-expression-function/)</u>

<u>PySpark – lit()</u>
(https://sparkbyexamples.com/pyspark/pyspark-lit-add-literal-constant/)</u>

<u>PySpark - split()</u>
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## Complete Example of PySpark substring()

```
import pyspark
from pyspark.sql import SparkSessid
from pyspark.sql.functions import
spark=SparkSession.builder.appName
data = [(1,"20200828"),(2,"20180525
columns=["id","date"]
df=spark.createDataFrame(data,colum
#Using SQL function substring()
df.withColumn('year', substring('da
    .withColumn('month', substring(
    .withColumn('day', substring('d
df.printSchema()
df.show(truncate=False)
#Using select
df1=df.select('date', substring('date')
                  substring('date'
                  substring('date'
#Using with selectExpr
df2=df.selectExpr('date', 'substrir
                   'substring(date,
                   'substring(date,
#Using substr from Column type
df3=df.withColumn('year', col('date
  .withColumn('month',col('date').s
  .withColumn('day', col('date').su
df3.show()
```

### Conclusion

In this session, we have learned different ways of getting substring of a column in PySpark DataFarme. I hope you liked it! Keep practicing. And do comment in the comment section for any kind of questions!!

PySpark - concat ws()

(https://sparkbyexamples.com/pyspark/pyspark-convert-array-column-to-string-column/)

<u>Pyspark – substring()</u>
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PySpark – translate() (https://sparkbyexamples.com/pyspark/pyspark-replace-column-values/#translate-replace-character-by-character)

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ark/pyspark-replace-columnvalues/#regexp\_replace-replacestring-columns)

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<u>PySpark – to\_timestamp()</u>
(https://sparkbyexamples.com/spark
/pyspark-to\_timestamp-convertstring-to-timestamp-type/)

<u>PySpark - to\_date()</u>
(https://sparkbyexamples.com/pyspark/pyspark-to\_date-convert-timestamp-to-date/)</u>

<u>PySpark – date\_format()</u>
(https://sparkbyexamples.com/pyspark/pyspark-date\_format-convert-date-to-string-format/)

PySpark – datediff()
(https://sparkbyexamples.com/pysp
ark/pyspark-difference-betweentwo-dates-days-monthsyears/#datediff)

PySpark - months\_between() (https://sparkbyexamples.com/pyspark/pyspark-difference-between-two-dates-days-months-years/#months\_between())

<u>PySpark – explode()</u>
(https://sparkbyexamples.com/pyspark/pyspark-explode-nested-array-into-rows/)</u>

<u>PySpark – array\_contains()</u>
(https://sparkbyexamples.com/pyspark/pyspark-arraytype-column-withexamples/#array\_contains)

<u>PySpark – array()</u> (https://sparkbyexamples.com/pyspark/pyspark-arraytype-column-withexamples/#array)</u>

<u>PySpark – collect\_list()</u> (https://sparkbyexamples.com/pysp

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Giri 27 NOV 2020 REPLY

Good work



NNK 28 NOV 2020 REPLY

Thanks Giri.

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