


PySpark
Learning Hub | Practice Problem



Akash Mahindrakar
Data Engineer
akashsjce8050@gmail.com

Step - 1 : Problem Statement

16_Select in pyspark

Write a pyspark code perform below function

- Write a pyspark code to get all employee detail.
- Write a query to get only "FirstName" column from emp_df
- Write a Pyspark code to get FirstName in upper case as "First Name".
- Write a pyspark code to get FirstName in lower case

Difficult Level : EASY

DataFrame:

```
data = [  
    [1, "Vikas", "Ahlawat", 600000.0, "2013-02-15 11:16:28.290", "IT",  
     "Male"],  
    [2, "nikita", "Jain", 530000.0, "2014-01-09 17:31:07.793", "HR", "Female"],  
    [3, "Ashish", "Kumar", 1000000.0, "2014-01-09 10:05:07.793", "IT",  
     "Male"],  
    [4, "Nikhil", "Sharma", 480000.0, "2014-01-09 09:00:07.793", "HR",  
     "Male"],  
    [5, "anish", "kadian", 500000.0, "2014-01-09 09:31:07.793", "Payroll",  
     "Male"],  
]  
# Create a schema for the DataFrame  
schema = StructType([  
    StructField("EmployeeID", IntegerType(), True),  
    StructField("First_Name", StringType(), True),  
    StructField("Last_Name", StringType(), True),  
    StructField("Salary", DoubleType(), True),  
    StructField("Joining_Date", StringType(), True),  
    StructField("Department", StringType(), True),  
    StructField("Gender", StringType(), True)  
])
```

PYSPARK LEARNING HUB : DAY - 16

Step - 2 : Writing the pyspark code to solve

Creating Spark Session

```
from pyspark.sql import SparkSession
from pyspark.sql.types import
StructType, StructField, IntegerType, StringType
```

#creating spark session

```
spark = SparkSession. \
builder. \
config('spark.shuffle.useOldFetchProtocol', 'true'). \
config('spark.ui.port','0'). \
config("spark.sql.warehouse.dir", "/user/itv008042/warehouse"). \
enableHiveSupport(). \
master('yarn'). \
getOrCreate()
```

Create a list of rows from the image

```
data = [
    [1, "Vikas", "Ahlawat", 600000.0, "2013-02-15 11:16:28.290",
    "IT", "Male"],
    [2, "nikita", "Jain", 530000.0, "2014-01-09 17:31:07.793", "HR",
    "Female"],
    [3, "Ashish", "Kumar", 1000000.0, "2014-01-09 10:05:07.793",
    "IT", "Male"],
    [4, "Nikhil", "Sharma", 480000.0, "2014-01-09 09:00:07.793",
    "HR", "Male"],
    [5, "anish", "kadian", 500000.0, "2014-01-09 09:31:07.793",
    "Payroll", "Male"],
]
```

Create a schema for the DataFrame

```
schema = StructType([
    StructField("EmployeeID", IntegerType(), True),
    StructField("First_Name", StringType(), True),
    StructField("Last_Name", StringType(), True),
```

PYSPARK LEARNING HUB : DAY - 16

```
StructField("Salary", DoubleType(), True),
StructField("Joining_Date", StringType(), True),
StructField("Department", StringType(), True),
StructField("Gender", StringType(), True)
])

emp_df=spark.createDataFrame(data,schema)
```

#1. Write a pyspark code to get all employee detail

```
emp_df.show()
```

EmployeeID	First_Name	Last_Name	Salary	Joining_Date	Department	Gender
1	Vikas	Ahlawat	600000.0	2013-02-15 11:16:...	IT	Male
2	nikita	Jain	530000.0	2014-01-09 17:31:...	HR	Female
3	Ashish	Kumar	1000000.0	2014-01-09 10:05:...	IT	Male
4	Nikhil	Sharma	480000.0	2014-01-09 09:00:...	HR	Male
5	anish	kadian	500000.0	2014-01-09 09:31:...	Payroll	Male

2. Write a query to get only "FirstName" column from emp_df

Method 1

```
emp_df.select("First_Name").show()
```

Method 2

```
emp_df.select(col("First_Name")).show()
```

Method 3

```
emp_df.createOrReplaceTempView("emp_table")
spark.sql("select First_Name from emp_table").show()
```

PYSPARK LEARNING HUB : DAY - 16

```
+-----+
|First_Name|
+-----+
|      Vikas|
|     nikita|
|    Ashish|
|    Nikhil|
|     anish|
+-----+
```

```
+-----+
|First_Name|
+-----+
|      Vikas|
|     nikita|
|    Ashish|
|    Nikhil|
|     anish|
+-----+
```

```
+-----+
|First_Name|
+-----+
|      Vikas|
|     nikita|
|    Ashish|
|    Nikhil|
|     anish|
+-----+
```

PYSPARK LEARNING HUB : DAY - 16

3. Write a Pyspark code to get FirstName in upper case as "First Name".

```
emp_df.select(upper("First_Name")).show()
```

```
+-----+
|upper(First_Name)|
+-----+
|                VIKAS|
|                NIKITA|
|                ASHISH|
|                NIKHIL|
|                ANISH|
+-----+
```

#4. Write a pyspark code to get FirstName in lower case

```
from pyspark.sql.functions import lower
emp_df.select(lower("First_Name")).show()
```

```
+-----+
|lower(First_Name)|
+-----+
|                vikas|
|                nikita|
|                ashish|
|                nikhil|
|                anish|
+-----+
```



Save

**Was it
helpful?**
follow for more!



Akash Mahindrakar

Data Engineer

akashsjce8050@gmail.com



Comment

**SHARE YOUR THOUGHTS
IN COMMENT BELOW**



Share