1. Column class represents a single column in a DataFrame.
2. Column class provides several functions to work with DataFrame to manipulate the column values, evaluate the Boolean expression to filter rows, retrieve a value or part of a value from a DataFrame column.
3. One of the simplest ways to create a column class object is by using Pyspark lit() SQL function.

from pyspark.sql.functions import \*  
from pyspark.sql import \*  
  
spark = SparkSession.builder.appName('Column\_class').getOrCreate()  
  
data = [('Harsha','male',2000),  
 ('Mokshit','male',4000)]  
  
schema = ['name','gender','salary']  
  
df = spark.createDataFrame(data,schema)  
  
df1 = df.withColumn('location',lit('Bangalore'))  
  
df1.show()  
df1.printSchema()

**Output:**

+-------+------+------+---------+

| name|gender|salary| location|

+-------+------+------+---------+

| Harsha| male| 2000|Bangalore|

|Mokshit| male| 4000|Bangalore|

+-------+------+------+---------+

root

|-- name: string (nullable = true)

|-- gender: string (nullable = true)

|-- salary: long (nullable = true)

|-- location: string (nullable = false)

**Access column from DataFrame**

*# Access column from DataFrame*from pyspark.sql.functions import \*  
from pyspark.sql import \*  
  
spark = SparkSession.builder.appName('Column\_class').getOrCreate()  
  
data = [('Harsha','male',2000),  
 ('Mokshit','male',4000)]  
  
schema = ['name','gender','salary']  
  
df = spark.createDataFrame(data,schema)  
  
df1 = df.withColumn('location',lit('Bangalore'))  
  
df1.select(df1.name).show()  
df1.select(df1['gender']).show()  
df1.select(col('salary')).show()

**Output:**

+-------+

| name|

+-------+

| Harsha|

|Mokshit|

+-------+

+------+

|gender|

+------+

| male|

| male|

+------+

+------+

|salary|

+------+

| 2000|

| 4000|

+------+

**Example – Accessing the Struct Column**

*# Access column from DataFrame*from pyspark.sql.functions import \*  
from pyspark.sql import \*  
from pyspark.sql.types import \*  
  
spark = SparkSession.builder.appName('Column\_class').getOrCreate()  
  
data = [('Harsha','male',2000,('black','brown')),  
 ('Mokshit','male',4000,('black','blue'))  
 ]  
  
propsType = StructType([StructField('hair',StringType()),  
 StructField('eye',StringType())])  
  
schema = StructType([StructField('name', StringType()),  
 StructField('gender',StringType()),  
 StructField('salary',IntegerType()),  
 StructField('props',propsType)])  
  
df = spark.createDataFrame(data,schema)  
  
df.select(df.props.hair).show()  
df.select(df['props.eye']).show()  
df.select(col('props.eye')).show()

**Output:**

+----------+

|props.hair|

+----------+

| black|

| black|

+----------+

+-----+

| eye|

+-----+

|brown|

| blue|

+-----+

+-----+

| eye|

+-----+

|brown|

| blue|

+-----+