```
In [122...  import findspark
            from pyspark.streaming import StreamingContext
            from pyspark.sql import SparkSession,SQLContext
            from pyspark import SparkContext
            import math

            findspark.init()
```

```
In [123...  try: ssc.stop(True, True)
            except: pass
            try: spark.stop()
            except: pass
```

```
In [124...  spark=SparkSession.builder.appName("SparkStreaming-05").master('local[1]').getOrCreate()
            sc=spark.sparkContext
            ssc.checkpoint('checkpoint-05') # define it after all context, else other context gets er
            # .config("spark.driver.allowMultipleContexts","true")
            spark
```

Out[124... **SparkSession - in-memory**

SparkContext

Spark UI

Version	v2.4.8
Master	local[1]
AppName	SparkStreaming-05

```
In [125...  ssc=StreamingContext(sc, 1)
            sqlContext=SQLContext(sc)
            ssc # 1=1 second
```

Out[125... <pyspark.streaming.context.StreamingContext at 0x293ec0bf988>

```
In [126...  stream=ssc.queueStream([
                sc.parallelize([(1,'a'),(2,'b'),(1,'c'),(2,'d'),(1,'e'),(3,'f')]),
                sc.parallelize([(2,'h'),(2,'i'),(1,'j'),(2,'k'),(1,'l'),(3,'m')])
            ],oneAtATime=True)
```

```
In [127...  def printrdd(rdd):
                print(rdd.collect())
                df=sqlContext.createDataFrame(rdd,['count','word'])
            #     df.pprint()
                print(df.show())

            stream.foreachRDD(printrdd)
```

```
In [128...  ssc.start()
```

```
[(1, 'a'), (2, 'b'), (1, 'c'), (2, 'd'), (1, 'e'), (3, 'f')]
+-----+----+
|count|word|
+-----+----+
```

```
|    1|   a|
|    2|   b|
|    1|   c|
|    2|   d|
|    1|   e|
|    3|   f|
+-----+----+

None
[(2, 'h'), (2, 'i'), (1, 'j'), (2, 'k'), (1, 'l'), (3, 'm')]
```

In [129…

```
+-----+----+
|count|word|
+-----+----+
|    2|   h|
|    2|   i|
|    1|   j|
|    2|   k|
|    1|   l|
|    3|   m|
+-----+----+

None
[]
[]
```

In [ ]: