In [1]:
```
sc
```

Out[1]: **SparkContext**

Spark UI

Version	`v4.0.0`
Master	`local[*]`
AppName	`PySparkShell`

Perform simple data transformation like filtering even numbers from a given list using PySpark RDD

In [3]:
```
# from pyspark import SparkContext
import random

# Step 1: Initialize SparkContext
# sc = SparkContext("local", "EvenNumberFilter")
```

In [4]:
```
# Step 2: Generate 100 random integers between 1 and 1000
random_numbers = [random.randint(1, 1000) for _ in range(100)]

print("Original List:")
print(random_numbers)
```

```
Original List:
[143, 686, 654, 592, 210, 355, 87, 440, 252, 747, 654, 397, 406, 884, 106, 360, 5
15, 169, 804, 163, 581, 518, 351, 534, 530, 683, 277, 33, 335, 592, 579, 9, 410,
81, 986, 76, 191, 172, 764, 974, 384, 884, 708, 120, 483, 654, 524, 506, 6, 367,
305, 973, 70, 780, 257, 761, 582, 529, 802, 19, 848, 690, 156, 653, 211, 171, 72
0, 322, 763, 249, 941, 665, 153, 683, 352, 309, 80, 256, 626, 851, 57, 689, 366,
877, 169, 504, 607, 938, 982, 242, 618, 315, 704, 550, 465, 103, 301, 323, 738, 6
10]
```

In [5]:
```
# Step 3: Parallelize the list into an RDD
numbers_rdd = sc.parallelize(random_numbers)
```

In [6]:
```
# Step 4: Filter only even numbers
even_numbers_rdd = numbers_rdd.filter(lambda x: x % 2 == 0)
```

In [7]:
```
# Step 5: Collect results
even_numbers = even_numbers_rdd.collect()

print("\nEven Numbers:")
print(even_numbers)
```

```
Even Numbers:
[686, 654, 592, 210, 440, 252, 654, 406, 884, 106, 360, 804, 518, 534, 530, 592,
410, 986, 76, 172, 764, 974, 384, 884, 708, 120, 654, 524, 506, 6, 70, 780, 582,
802, 848, 690, 156, 720, 322, 352, 80, 256, 626, 366, 504, 938, 982, 242, 618, 70
4, 550, 738, 610]
```

In [8]:
```
# Stop SparkContext
# sc.stop()
```