

## Using GreddelApp to Calculate Black Queens from largedeck.txt file

The screenshot shows an IDE with a Scala file named `CalculateBlackQueens.scala`. The code uses Spark SQL to read a text file `largedeck.txt` and calculate the number of black queens. The output is displayed in the console.

```
import org.apache.spark.sql.{SparkSession, DataFrame}

object CalculateBlackQueens {
  def main(args: Array[String]): Unit = {
    val session = SparkSession.builder().appName("App Demo")
      .config("spark.master", "local")
      .getOrCreate()

    val sc = session.sparkContext
    val cards = sc.textFile(path = "C:\\Users\\star\\Downloads\\BigData101\\BigDataHadoop101\\sample_data\\largedeck.txt")
    println(cards.count())
    val blackCards = cards.filter(line => line.contains("BLACK")).count()
    println("Total Black Cards are: " + blackCards)
    val blackQueenCards = cards.filter(line => line.contains("Q")).filter(line => line.contains("BLACK")).count()
    println("Total Black Queen Cards are: " + blackQueenCards)
  }
}
```

The console output shows the following logs:

```
21/06/23 09:40:44 INFO DABScheduler: Job 2 finished: count at CalculateBlackQueens.scala:15, took 80.122756 s
Total Black Queen Cards are: 2097152
21/06/23 09:40:44 INFO SparkContext: Invoking stop() from shutdown hook
21/06/23 09:40:44 INFO SparkUI: Stopped Spark web UI at http://DESKTOP-LVT0SP9:4040
21/06/23 09:40:44 INFO MapOutputTrackerMasterEndpoint: MapOutputTrackerMasterEndpoint stopped!
21/06/23 09:40:44 INFO MemoryStore: MemoryStore cleared
21/06/23 09:40:44 INFO BlockManager: BlockManager stopped
21/06/23 09:40:45 INFO BlockManagerMaster: BlockManagerMaster stopped
21/06/23 09:40:45 INFO OutputCommitCoordinator$OutputCommitCoordinatorEndpoint: OutputCommitCoordinator stopped!
21/06/23 09:40:45 INFO SparkContext: Successfully stopped SparkContext
21/06/23 09:40:45 INFO ShutdownHookManager: Shutdown hook called
```