Assignment 28

Delayed_Flights.csv Datasets (Downloaded from https://drive.google.com/file/d/0B_Qjau8wv1KoWTVDUVFOdzlJNWM/view)

There are 29 columns in this dataset. Some of them have been mentioned below:

- Year: 1987 – 2008
- Month: 1 – 12
- FlightNum: Flight number
- Canceled: Was the flight canceled?
- CancelleationCode: The reason for cancellation.

Problem Statement 1

- Find out the top 5 most visited destinations.

Problem Statement 2

- Which month has seen the most number of cancellations due to bad weather?

Problem Statement 3

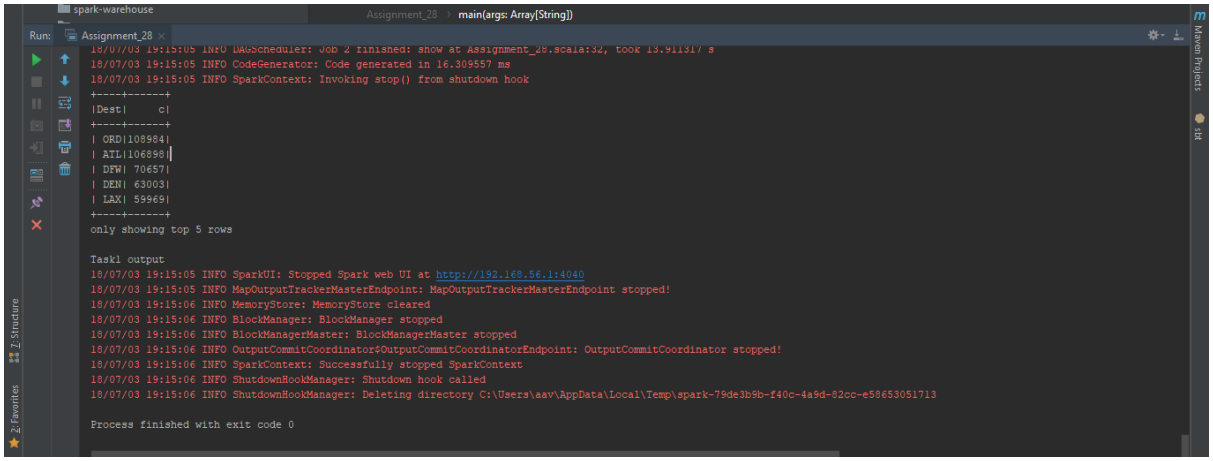
- Which route (origin & destination) has seen the maximum diversion?

Complete Code

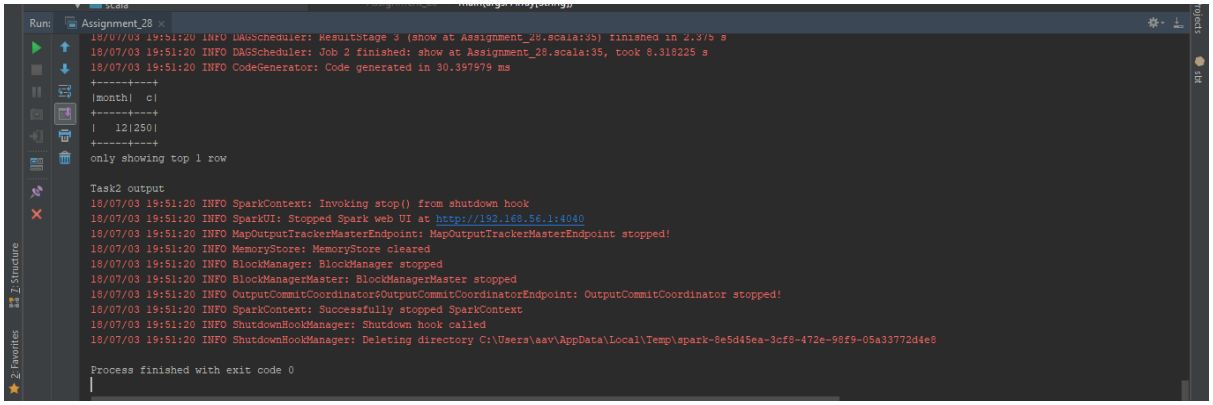
```
import org.apache.spark.sql.SparkSession
import org.apache.spark.sql.functions._
object Assignment_28 {
 case class Flight(Month:Int,Origin: String,Dest:String,CancellationCode:String,Diverted:Int)
 def main(args: Array[String]): Unit = {
  println("hey scala")
  val spark = SparkSession
   .builder()
   .master("local")
   .appName("Assignment 28")
   .config("spark.some.config.option", "some-value")
```

```
      .getOrCreate()
    println("Spark Session Object created")
    val data =
spark.sparkContext.textFile("E:\\Avani\\Acadgild\\Datasets\\DelayedFlights.csv");
    val header = data.first()
    val data1 = data.filter(x => x != header)
    val num = println("aviation data->>" + data1.count())
    println("removed header")


    import spark.implicits._
    val s = data1.map(x => x.split(",")).map(x =>
Flight(x(2).toInt,x(17),x(18),x(23),x(24).toInt)).toDF
  println("Aviation data")
    s.registerTempTable("fly")
    println("temp table created")
   val Destinations = spark.sql("SELECT Dest,count(Dest) c from fly group by Dest order by c
desc").show(5)
    println("Task1 output")


    val cancel = spark.sql("SELECT month,count(CancellationCode) c from fly where
CancellationCode = 'B' group by month order by c desc").show(1)
    println("Task2 output")


  val diversion = spark.sql("SELECT Origin, Dest, count(Diverted)d from fly WHERE diverted =
1 GROUP BY origin,dest ORDER BY d DESC").show(1)
    println("Task3 output")
  }
}
```

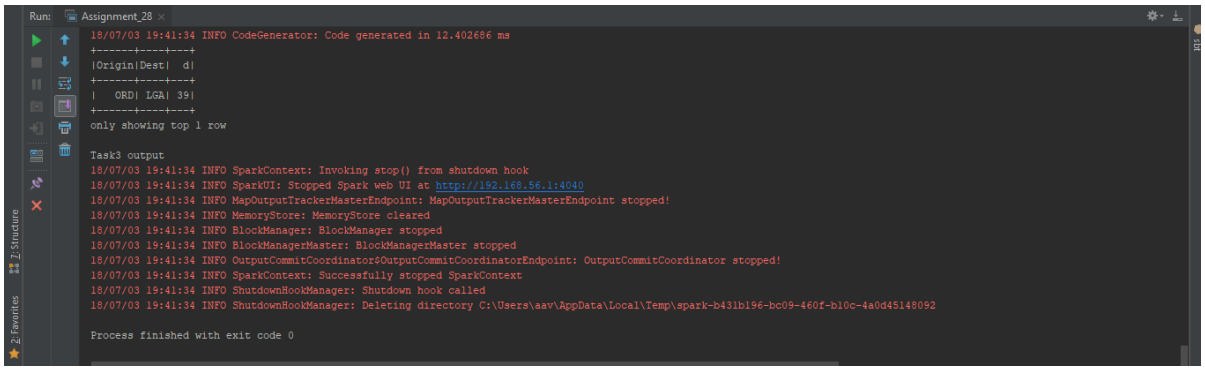
Screenshots



Task1



Task2



Task3