1-

val baseRDD1 = sc.textFile("/home/acadgild/hadoop/S18\_Dataset\_Holidays.txt")

val baseRDD2 = sc.textFile("/home/acadgild/hadoop/S18\_Dataset\_Transport.txt")

val baseRDD3 = sc.textFile("/home/acadgild/hadoop/S18\_Dataset\_User\_details.txt")

import org.apache.spark.storage.StorageLevel

baseRDD1.persist(StorageLevel.MEMORY\_ONLY)

baseRDD2.persist(StorageLevel.MEMORY\_ONLY)

baseRDD3.persist(StorageLevel.MEMORY\_ONLY)

val travel = baseRDD1.map(x => (x.split(",")(0).toInt,x.split(",")(1),x.split(",")(2),x.split(",")(3),x.split(",")(4).toInt,x.split(",")(5).toInt))

val transport = baseRDD2.map(x => (x.split(",")(0),x.split(",")(1).toInt))

val user = baseRDD3.map(x => (x.split(",")(0).toInt,x.split(",")(1),x.split(",")(2).toInt))

val travelmap = travel.map(x=> x.\_4 -> (x.\_2,x.\_5,x.\_6))

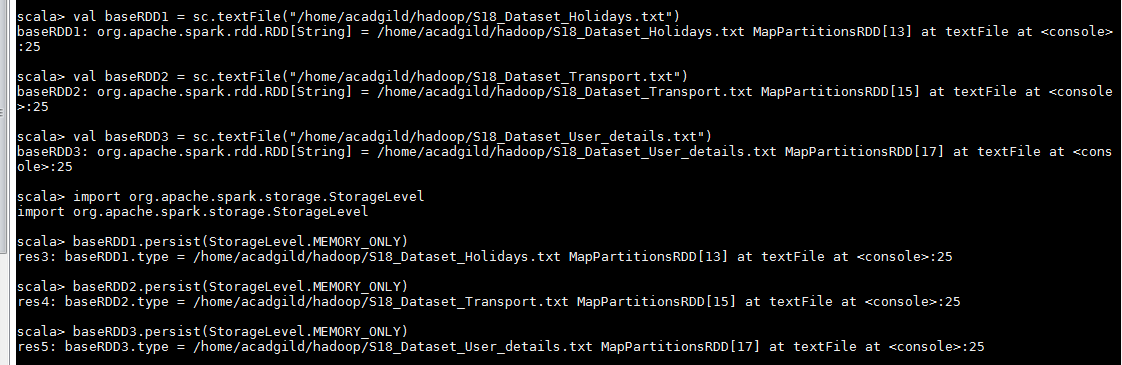
val transportmap = transport.map(x=> x.\_1 -> x.\_2)

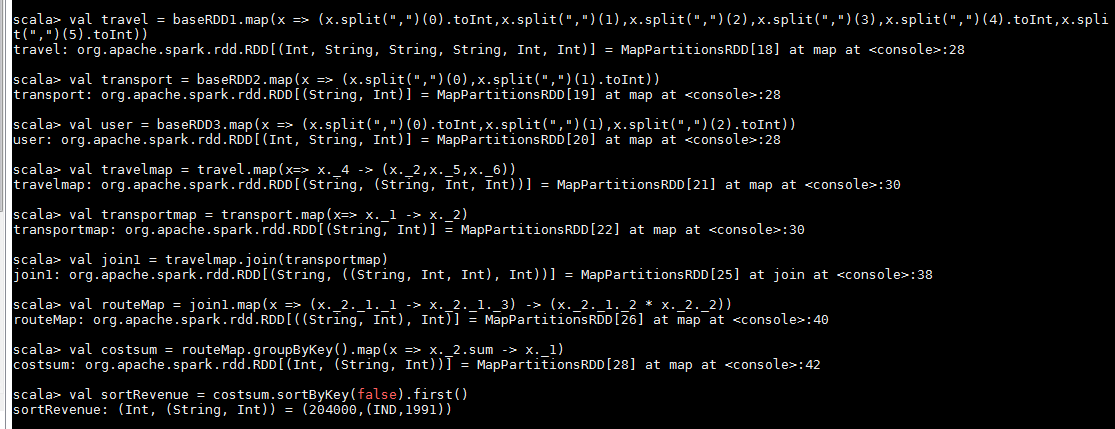
val join1 = travelmap.join(transportmap)

val routeMap = join1.map(x => (x.\_2.\_1.\_1 -> x.\_2.\_1.\_3) -> (x.\_2.\_1.\_2 \* x.\_2.\_2))

val costsum = routeMap.groupByKey().map(x => x.\_2.sum -> x.\_1)

val sortRevenue = costsum.sortByKey(false).first()





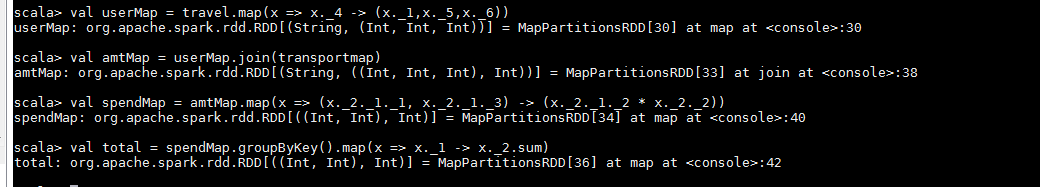
2-

val userMap = travel.map(x => x.\_4 -> (x.\_1,x.\_5,x.\_6))

val amtMap = userMap.join(transportmap)

val spendMap = amtMap.map(x => (x.\_2.\_1.\_1, x.\_2.\_1.\_3) -> (x.\_2.\_1.\_2 \* x.\_2.\_2))

val total = spendMap.groupByKey().map(x => x.\_1 -> x.\_2.sum)



3-

val AgeMap = user.map(x => x.\_1 ->

{

if(x.\_3<20)

"20"

else if(x.\_3>35)

"35"

else "20-35"

})

val UIDMap = travel.map(x => x.\_1 -> 1)

val joinMap = AgeMap.join(UIDMap)

val joinMap2 = joinMap.map(x => x.\_2.\_1 -> x.\_2.\_2)

val groupKey = joinMap2.groupByKey.map(x => x.\_1 -> x.\_2.sum)

val maxVal = groupKey.sortBy(x => -x.\_2).first()

