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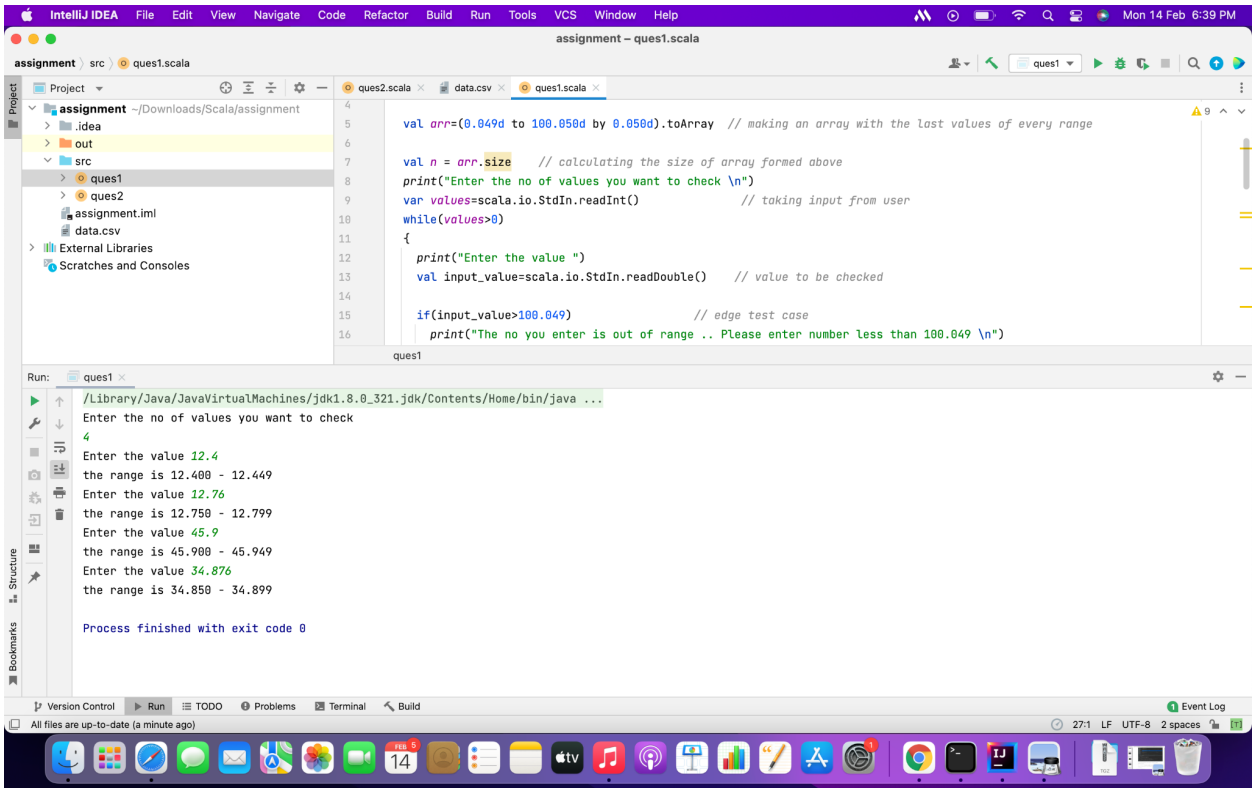
1. Bucketise the given array[Double] into buckets having range interval (x, x+0.049).

0.000 - 0.049
0.050 - 0.099
0.100 - 0.149
0.150 - 0.199
0.200 - 0.249
0.250 - 0.299
0.300 - 0.349
0.350 - 0.399
...
...
100.000 - 100.049

```
import scala.math.BigDecimal.double2bigDecimal

object ques1 extends App{

 val arr=(0.049d to 100.050d by 0.050d).toArray  // making an array with the
last values of every range

 val n = arr.size    // calculating the size of array formed above
 print("Enter the no of values you want to check \n")
 var values=scala.io.StdIn.readInt()               // taking input from user
 while(values>0)
 {
   print("Enter the value ")
   val input_value=scala.io.StdIn.readDouble()    // value to be checked

   if(input_value>100.049)                   // edge test case
     print("The no you enter is out of range .. Please enter number less than
100.049 \n")

   else {
     val answer = binary_search(arr, n, BigDecimal(input_value))  // function
call
     print("the range is ")
     val range2 = arr(answer)    // calculating range by index of array
     var range1 = range2 - 0.049
     println(s"${range1} - ${range2}")    // printing the required range
     values = values - 1
   }
 }
```

```
 // it gives the index of array that is equal to or just above the value
entered by user
 def binary_search(arr:Array[BigDecimal],size:Int,value:BigDecimal):Int={

   var start=0
   var end=size-1
   while(start<end)
   {
     val mid = (start + (end - start) / 2)
     if(arr(mid)>=value)
       end=mid
     else
       start=mid+1
   }
   if(start<size && arr(start)<value)
     start+=1

   return start

 }
}
```



2. For given players statistics..

Found the below -

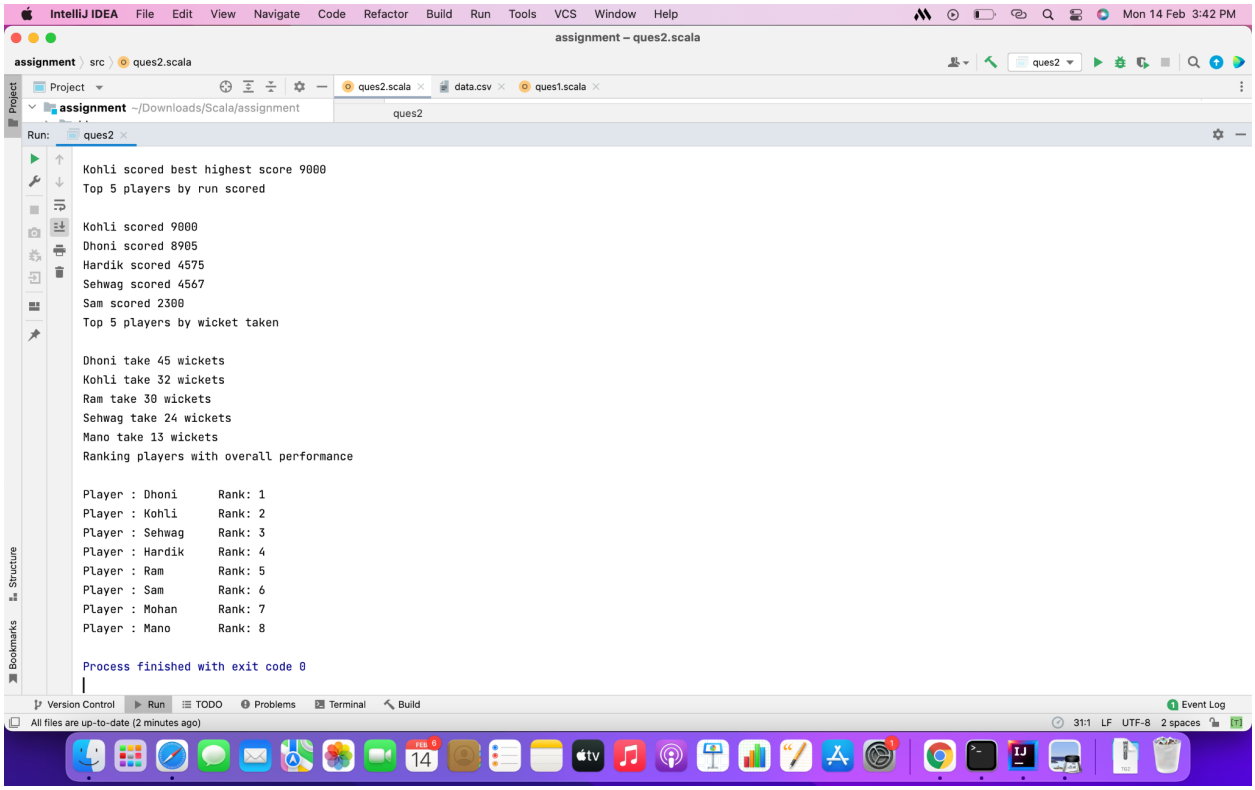
1. Player with the best highest run scored.
2. Top 5 players by run scored.
3. Top 5 players by wicket taken.
4. Rank players with overall performance give weight 5x to wicket taken and (5/100)x to run scored.

Sample -

Year, PlayerName, Country, Matches, Runs, Wickets
2021, Sam, India, 23, 2300, 3
2021, Ram, India, 23, 300, 30
2021, Mano, India, 23, 300, 13

```
import scala.collection.mutable.ArrayBuffer
import scala.io.Source
import scala.collection.immutable.Vector
import scala.collection.immutable.Map
import scala.collection.immutable.ListMap

object ques2 extends App {
 val rows = ArrayBuffer[Array[String]]()
 val bufferedSource =
io.Source.fromFile("/Users/kirti_sigmoid/Downloads/Scala/assignment/data.
csv")
 for (line <- bufferedSource.getLines.drop(1)) {
   rows += line.split(",").map(_.trim)

 }
//  for (row <- rows) {
//    println(s"${row(0)}|${row(1)}|${row(2)}|${row(3)}")
//  }


 val score = scala.collection.mutable.Map.empty[String,Int]
 val wickets = scala.collection.mutable.Map.empty[String,Int]
 val rank = scala.collection.mutable.Map.empty[String,Int]
// println(rows(1)(1))
// println(rows.length)

var i = 0
var max=0
 println( "Player with the best highest run scored\n")
for (j <- 0 to rows.length-1){

    score+=(rows(j)(1)->rows(j)(4).toInt)
    wickets+=(rows(j)(1)->rows(j)(5).toInt)
    rank+=(rows(j)(1)->(rows(j)(5).toInt*5 + rows(j)(4).toInt*.05).toInt)
```

```
  if (rows(j)(4).toInt > max)
  {
    max=rows(j)(4).toInt
    i=j
  }
}
println(rows(i)(1)+" scored best highest score "+rows(i)(4))


var res = ListMap(score.toSeq.sortWith(_._2 > _._2):_*)

println("Top 5 players by run scored\n")
res.take(5).foreach
{
  case (key, value) => println (key + " scored " + value)
}


println("Top 5 players by wicket taken\n")
res=ListMap(wickets.toSeq.sortWith(_._2 > _._2):_*)
res.take(5).foreach
{
  case (key, value) => println (key + " take " + value+" wickets")
}
res=ListMap(rank.toSeq.sortWith(_._2 > _._2):_*)

var c=1
println("Ranking players with overall performance\n")
res.foreach
{
  case (key, value) => System.out.printf("Player : %-7s    Rank:
%s%n",key,c )
    c+=1
}
}
```


IntelliJ IDEA File Edit View Navigate Code Refactor Build Run Tools VCS Window Help
Mon 14 Feb 3:42 PM
assignment – ques2.scala
assignment src ques2.scala
ques2
Project
ques2.scala
data.csv
ques1.scala
assignment ~/Downloads/Scala/assignment
ques2
Run: ques2
Kohli scored best highest score 9000
Top 5 players by run scored
Kohli scored 9000
Dhoni scored 8905
Hardik scored 4575
Sehwag scored 4567
Sam scored 2300
Top 5 players by wicket taken
Dhoni take 45 wickets
Kohli take 32 wickets
Ram take 30 wickets
Sehwag take 24 wickets
Mano take 13 wickets
Ranking players with overall performance
Player : Dhoni Rank: 1
Player : Kohli Rank: 2
Player : Sehwag Rank: 3
Player : Hardik Rank: 4
Player : Ram Rank: 5
Player : Sam Rank: 6
Player : Mohan Rank: 7
Player : Mano Rank: 8
Process finished with exit code 0
Structure
Bookmarks
Version Control
Run
TODO
Problems
Terminal
Build
Event Log
All files are up-to-date (2 minutes ago)
31:1 LF UTF-8 2 spaces