BIG DATA HADOOP & SPARK TRAINING

Assignment on Scala I

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4/23/18

Task 1

Given a list of strings - List[String] (“alpha”, “gamma”, “omega”, “zeta”, “beta”)

- Find count of all strings with length 4.

```
Stringlist.count(s=>s.length==4)
```

Above code will count the strings with the length 4

- Convert the list of string to a list of integers, where each string is mapped to its corresponding length.

```
val newstringlist = stringlist.map(stringlist=>stringlist.length)
```

- Find count of all strings which contain alphabet ‘m’.

```
stringlist.count(s=>s.contains("m"))
```

- Find the count of all strings which start with the alphabet ‘a’.

```
stringlist.count(s=>s.startsWith("a"))
```

Task 2

Create a list of tuples, where the 1st element of the tuple is an int and the second element is a string.

Example - ((1, ‘alpha’), (2, ‘beta’), (3, ‘gamma’), (4, ‘zeta’), (5, ‘omega’))

- For the above list, print the numbers where the corresponding string length is 4.

```
for ((i,s) <- tuples if s.size == 4) yield i
```

- find the average of all numbers, where the corresponding string contains alphabet ‘m’ or alphabet ‘z’.

```
val modified_list = tuples.filter(s => s._2.contains('m') || s._2.contains('z')).map(x => x._1)// This code will filter the list contents where string should either contain “m” or “z” and this is saved in the variable modified_list
var sum = 0 //initializing the variable sum to 0
val ml = modified_list.foreach(x => sum+=x) // calculating the sum of each items in the modified list and saving it in variable ml
val counts = tuples.count(s => s._2.contains('m') || s._2.contains('z'))
// this  code will count the number of items in the list of filtered values
val answer_2 = sum /counts //calculate the average
```

Scala IDE workspace - assignments/assnt14part1.sc - Scala IDE

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assnt14part1.sc

```
object assnt14part1 {                                          Task 1
val stringlist = List("alpha", "gamma", "omega", "zeta", "beta")
                                          //> stringlist  : List[String] = List(alpha, gamma, omega, zeta, beta)
 stringlist.count(s=>s.length==4)         //> res0: Int = 2
 stringlist.forall(s=>s.contains("m"))    //> res1: Boolean = false
 stringlist.count(s=>s.contains("m"))     //> res2: Int = 2
 stringlist.count(s=>s.startsWith("a"))   //> res3: Int = 1
val newstringlist = stringlist.map(stringlist=>stringlist.length)
                                          //> newstringlist  : List[Int] = List(5, 5, 5, 4, 4)

 val tuples = List[(Int,String)] ((1, "alpha"), (2, "beta"), (3, "gamma"), (4, "zeta"), (5, "omega"))  Task2
                                          //> tuples  : List[(Int, String)] = List((1,alpha), (2,beta), (3,gamma), (4,zeta
                                          //| ), (5,omega))
for ((i,s) <- tuples if s.size == 4) yield i      //> res4: List[Int] = List(2, 4)

for((i,s) <- tuples if s.contains("m") | s.contains("z")) yield i
                                          //> res5: List[Int] = List(3, 4, 5)
val modified_list = tuples.filter(s => s._2.contains('m') || s._2.contains('z')).map(x => x._1)
                                          //> modified_list  : List[Int] = List(3, 4, 5)
var sum = 0                               //> sum  : Int = 0
val ml = modified_list.foreach(x => sum+=x)       //> ml  : Unit = ()
val counts = tuples.count(s => s._2.contains('m') || s._2.contains('z'))
                                          //> counts  : Int = 3
val answer_2 = sum /counts                //> answer_2  : Int = 4


}
```