

Session 14:

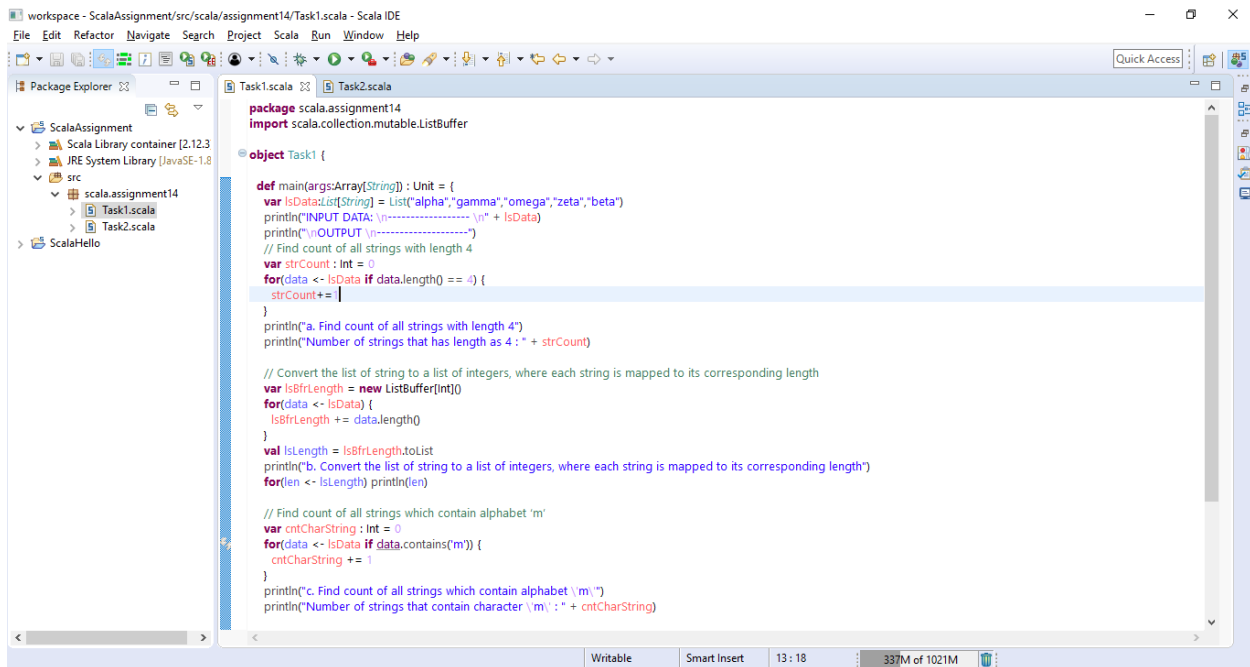
Scala Basics 1

Assignment 1

Task 1

- Given a list of strings - List[String] ("alpha", "gamma", "omega", "zeta", "beta")
- Find count of all strings with length 4.
 - Convert the list of string to a list of integers, where each string is mapped to its corresponding length.
 - Find count of all strings which contain alphabet 'm'.
 - Find the count of all strings which start with the alphabet 'a'.

SNAPSHOT:



```
package scala.assignment14
import scala.collection.mutable.ListBuffer

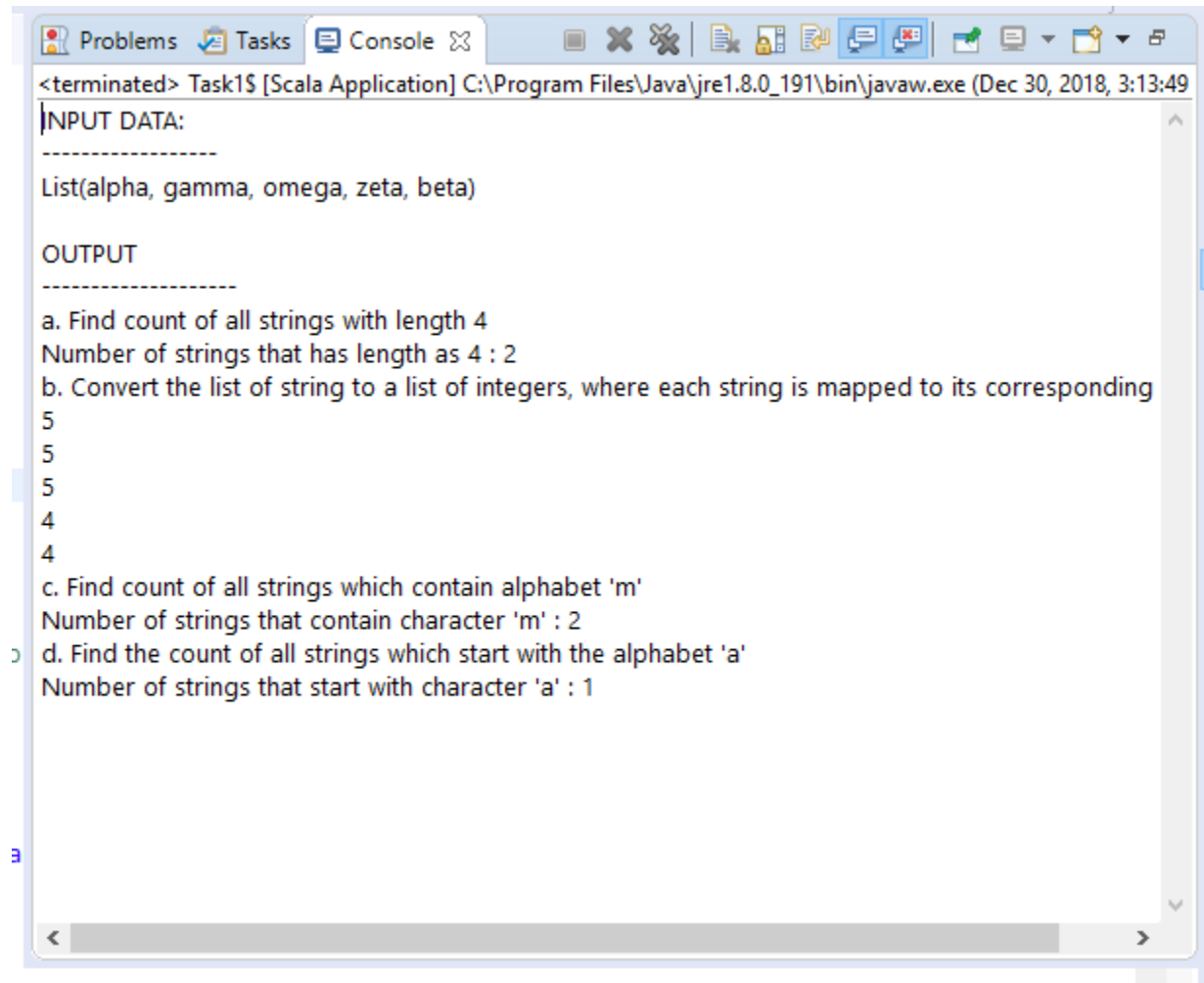
object Task1 {

  def main(args: Array[String]) : Unit = {
    var lsData: List[String] = List("alpha", "gamma", "omega", "zeta", "beta")
    println("INPUT DATA: \n" + lsData)
    println("=====")
    // Find count of all strings with length 4
    var strCount : Int = 0
    for(data <- lsData if data.length() == 4) {
      strCount += 1
    }
    println("a. Find count of all strings with length 4")
    println("Number of strings that has length as 4 : " + strCount)

    // Convert the list of string to a list of integers, where each string is mapped to its corresponding length
    var lsBfrLength = new ListBuffer[Int]()
    for(data <- lsData) {
      lsBfrLength += data.length()
    }
    val lsLength = lsBfrLength.toList
    println("b. Convert the list of string to a list of integers, where each string is mapped to its corresponding length")
    for(len <- lsLength) println(len)

    // Find count of all strings which contain alphabet 'm'
    var cntCharString : Int = 0
    for(data <- lsData if data.contains("m")) {
      cntCharString += 1
    }
    println("c. Find count of all strings which contain alphabet 'm'")
    println("Number of strings that contain character 'm' : " + cntCharString)
```

OUTPUT:



The screenshot shows an IDE console window titled "Task1\$ [Scala Application] C:\Program Files\Java\jre1.8.0_191\bin\javaw.exe (Dec 30, 2018, 3:13:49)". The console output is as follows:

```
<terminated> Task1$ [Scala Application] C:\Program Files\Java\jre1.8.0_191\bin\javaw.exe (Dec 30, 2018, 3:13:49)
INPUT DATA:
-----
List(alpha, gamma, omega, zeta, beta)

OUTPUT
-----
a. Find count of all strings with length 4
Number of strings that has length as 4 : 2
b. Convert the list of string to a list of integers, where each string is mapped to its corresponding
5
5
5
4
4
c. Find count of all strings which contain alphabet 'm'
Number of strings that contain character 'm' : 2
d. Find the count of all strings which start with the alphabet 'a'
Number of strings that start with character 'a' : 1
```

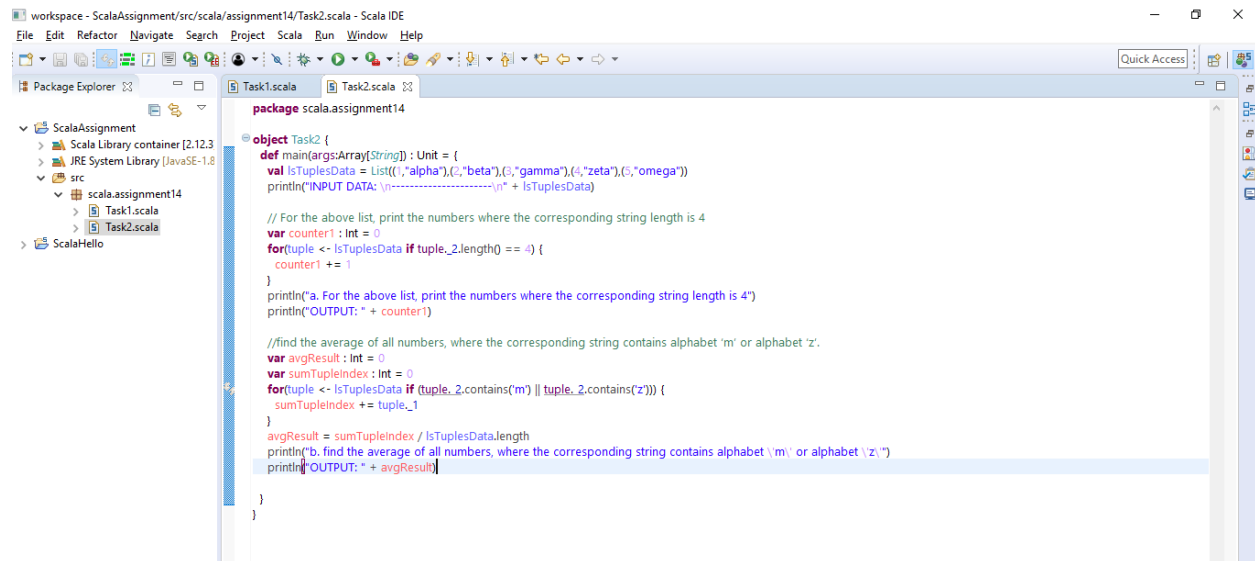
Task 2

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

SNAPSHOT:



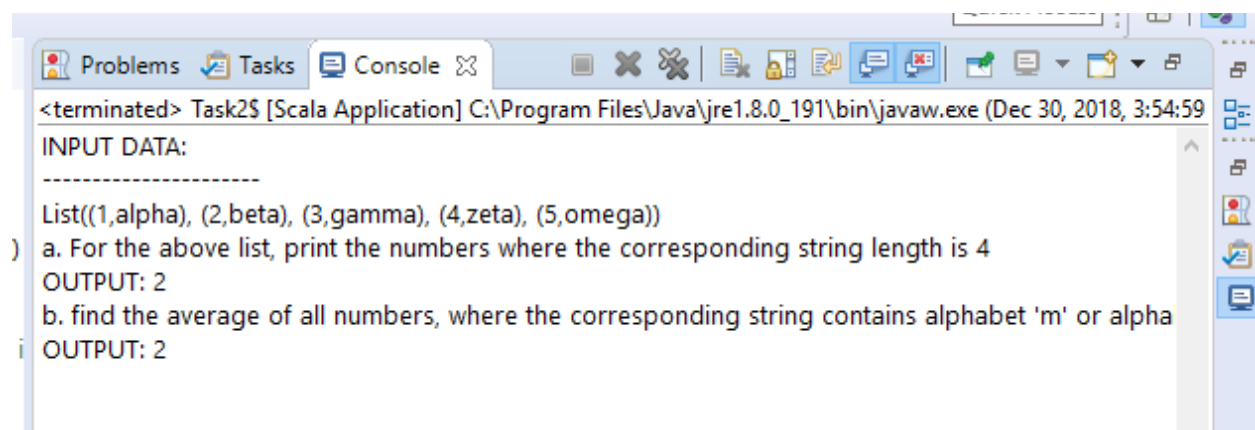
```
package scala.assignment14

object Task2 {
  def main(args: Array[String]): Unit = {
    val lstuplesData = List((1, "alpha"), (2, "beta"), (3, "gamma"), (4, "zeta"), (5, "omega"))
    println("INPUT DATA: \n-----\n" + lstuplesData)

    // For the above list, print the numbers where the corresponding string length is 4
    var counter1 : Int = 0
    for(tuple <- lstuplesData if tuple._2.length() == 4) {
      counter1 += 1
    }
    println("a. For the above list, print the numbers where the corresponding string length is 4")
    println("OUTPUT: " + counter1)

    //find the average of all numbers, where the corresponding string contains alphabet 'm' or alphabet 'z'.
    var avgResult : Int = 0
    var sumTupleIndex : Int = 0
    for(tuple <- lstuplesData if (tuple._2.contains('m') || tuple._2.contains('z'))) {
      sumTupleIndex += tuple._1
    }
    avgResult = sumTupleIndex / lstuplesData.length
    println("b. find the average of all numbers, where the corresponding string contains alphabet 'm' or alphabet 'z'")
    println("OUTPUT: " + avgResult)
  }
}
```

OUTPUT:



```
<terminated> Task2$ [Scala Application] C:\Program Files\Java\jre1.8.0_191\bin\javaw.exe (Dec 30, 2018, 3:54:59)
INPUT DATA:
-----
List((1,alpha), (2,beta), (3,gamma), (4,zeta), (5,omega))
) a. For the above list, print the numbers where the corresponding string length is 4
OUTPUT: 2
b. find the average of all numbers, where the corresponding string contains alphabet 'm' or alpha
i OUTPUT: 2
```