

## Assignment 14.1 - Scala 1.

### Task 1

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

**CMD:** `val firstList = List("alpha","gamma","omega","zeta","beta")`

- a) Find count of all strings with length 4.

**CMD:** `firstList.count(x => x.length == 4)`

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

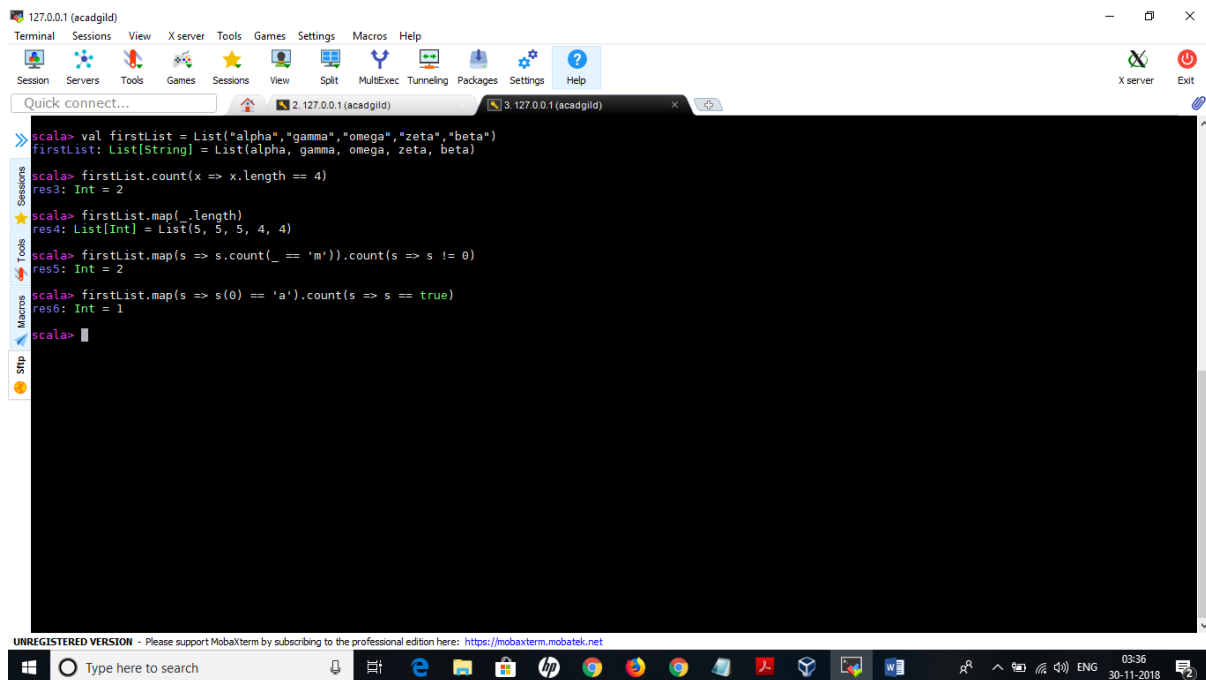
**CMD:** `firstList.map(_.length)`

- c) Find count of all strings which contain alphabet 'm'.

**CMD:** `firstList.map(s => s.count(_ == 'm')).count(s => s != 0)`

- d) Find the count of all strings which start with the alphabet 'a'.

**CMD:** `firstList.map(s => s(0) == 'a').count(s => s == true)`



The screenshot shows a MobaXterm terminal window with the following Scala code and output:

```
scala> val firstList = List("alpha","gamma","omega","zeta","beta")
firstList: List[String] = List(alpha, gamma, omega, zeta, beta)

scala> firstList.count(x => x.length == 4)
res3: Int = 2

scala> firstList.map(_.length)
res4: List[Int] = List(5, 5, 5, 4, 4)

scala> firstList.map(s => s.count(_ == 'm')).count(s => s != 0)
res5: Int = 2

scala> firstList.map(s => s(0) == 'a').count(s => s == true)
res6: Int = 1

scala>
```

### 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'))

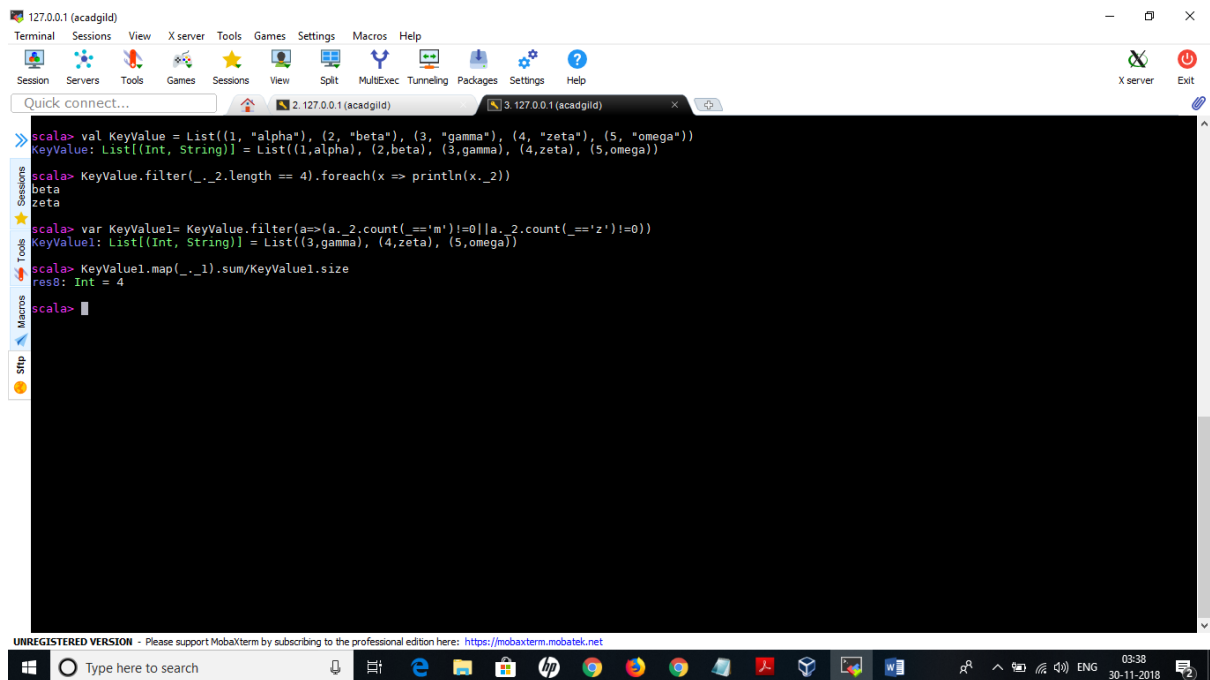
**CMD:** `val KeyValue = List((1, "alpha"), (2, "beta"), (3, "gamma"), (4, "zeta"), (5, "omega"))`

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

**CMD:** `KeyValue.filter(_._2.length == 4).foreach(x => println(x._2))`

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

**CMD:** `var KeyValue1= KeyValue.filter(a=>(a._2.count(_=='m')!=0||a._2.count(_=='z')!=0))`  
`KeyValue1.map(_._1).sum/KeyValue1.size`



The screenshot shows a MobaXterm terminal window with the following Scala code and output:

```
scala> val KeyValue = List((1, "alpha"), (2, "beta"), (3, "gamma"), (4, "zeta"), (5, "omega"))
KeyValue: List[(Int, String)] = List((1,alpha), (2,beta), (3,gamma), (4,zeta), (5,omega))

scala> KeyValue.filter(_._2.length == 4).foreach(x => println(x._2))
beta
zeta

scala> var KeyValue1= KeyValue.filter(a=>(a._2.count(_=='m')!=0||a._2.count(_=='z')!=0))
KeyValue1: List[(Int, String)] = List((3,gamma), (4,zeta), (5,omega))

scala> KeyValue1.map(_._1).sum/KeyValue1.size
res8: Int = 4

scala>
```

The terminal window has a menu bar (Terminal, Sessions, View, X server, Tools, Games, Settings, Macros, Help) and a toolbar. The status bar at the bottom indicates 'UNREGISTERED VERSION' and provides a link to the professional edition.