ASSIGNMENT 14.1

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’.

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’.

Solution

Below is the source code for both task 1 and task2.

```
package demo

object Assignment14_1  {

 def main(args: Array[String]): Unit = {

    task1
    task2
 }

  def task1=
  {
    println("#### TASK-1")
    val list = List("alpha", "gamma", "omega", "zeta", "beta")
    // count number of strings with length=4
    val count = list.count(x=>x.length==4)
    println("number of strings with length 4 = " + count)

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

    val newlist = list.map(x=>x.length)
    println("new list with each string mappped to its length = " + newlist)

    //Find count of all strings which contain alphabet 'm'.
    val mcount = list.count(x=>x.contains("m"))
    println("number of strings contaning alphabet m = " + mcount)

    val acount = list.count(x=>x.startsWith("a"))
    println("number of strings contaning alphabet m = " + acount)

  }
```

```
  def task2=
  {
    println("#### TASK-2")
    val list:List[(Int,String)]
=List((1,"alpha"),(2,"beta"),(3,"gamma"),(4,"zeta"),(5,"omega"))
    //For the above list, print the numbers where the corresponding string length is
4.
    list.map(t=>if(t._2.length==4)println("number corresponding to string length = "+
t._1))

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

    // filter the list for string containing only the tuples which contain letter 'm'
or 'z'
    val q=list.filter(t=>( t._2.contains("m") || t._2.contains("z") ) )
    // calculate sum for the first item of the tuple and divide by size of the list
    println("filtered list is " + q)
    val average=q.map(x=>x._1).sum/q.size
    println("The average is = " + average)


  }
```

Following is the output of running the program

TASK-1

number of strings with length 4 = 2

new list with each string mappped to its length = List(5, 5, 5, 4, 4)

number of strings contaning alphabet m = 2

number of strings contaning alphabet m = 1

TASK-2

number corresponding to string length = 2

number corresponding to string length = 4

filtered list is List((3,gamma), (4,zeta), (5,omega))

The average is = 4