# ASSIGNMENT 12.3

## Problem Statement:

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

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

1. For the above list, print the numbers where the corresponding string length is 4
2. Find the average of all numbers, where the corresponding string contains alphabet ‘m’ or ‘z’

## Solution:

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

Here is the code snippet I have written in Scala to get the required result:

```
val myTuple = List((1,"alpha"), (2,"beta"), (3,"gamma"), (4,"zeta"), (5,"omega"))
val result = myTuple.filter(tuple => tuple._2.length() == 4)
println("Numbers for which the corresponding string length is 4:")
result.foreach(tuple => println(tuple._1))
```

**Comments:**

Line 1: Initialize a list with few tuples (key, value pairs) of our choice. The resulting value is of type, List [(Int, String)]

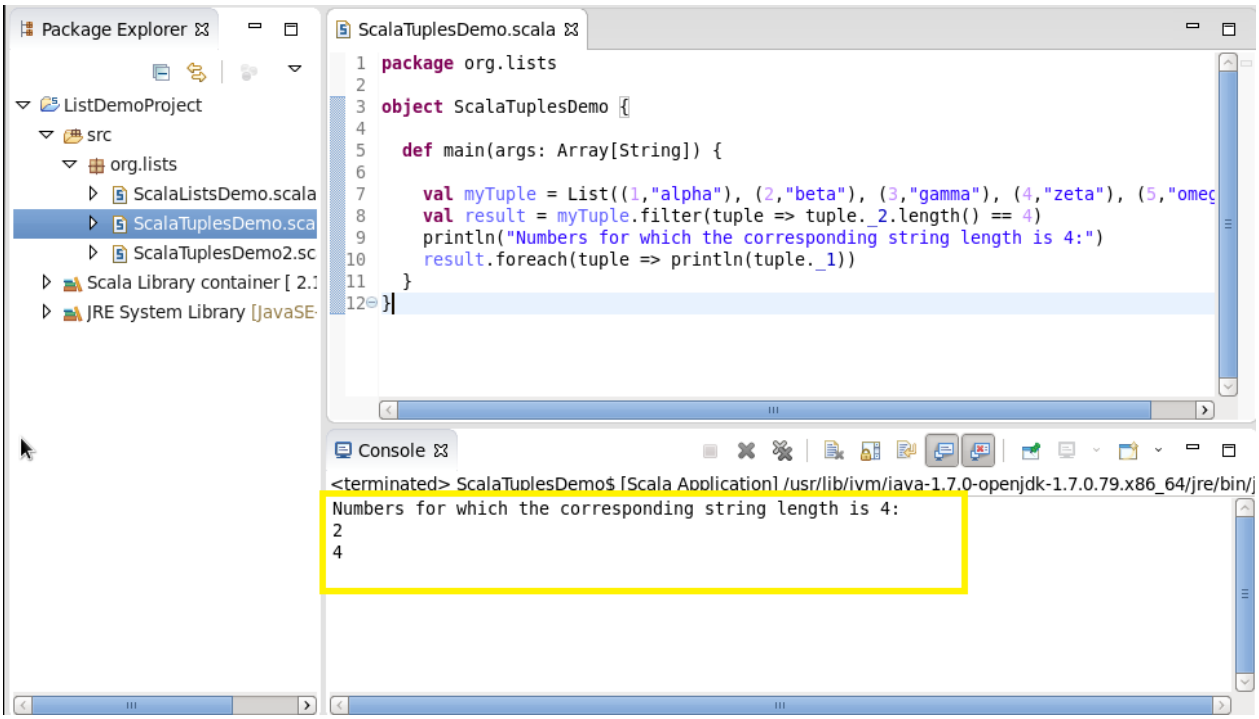
Line 2: Apply filter() method to get only those tuples which are of length 4. The resulting value is of same type as previous one.

Line 3: Print a caption for resulting values.

Line 4: Print result to the console.

**Output:**

```
Numbers for which the corresponding string length is 4:
2
4
```




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

Here is the code snippet I have written in Scala to get the required result:

```
val myTuple = List((1,"alpha"), (2,"beta"), (3,"gamma"), (4,"zeta"), (5,"omega"))

val result = myTuple.filter(tuple => tuple._2.contains('m') || tuple._2.contains('z'))

val keys = result.map(tuple => tuple._1)

println("Average of all numbers where the corresponding string contains 'm' or 'z': "

    + keys.sum / keys.length)
```

**Comments:**

Line 1: Initialize a list with few tuples (key, value pairs) of our choice. The resulting value is of type, List [(Int, String)]

Line 2: Apply filter() method to get only those tuples in which the String value contains either of these two alphabets: ‘m’ or ‘z’. The resulting value is of same type as previous one.

Line 3: Apply map function (for one-to-one mapping of list elements) that gives us only the key element of each tuple from the list of tuples. The resulting value is of type, List [Int]

Line 4: Calculate average of all the integer values from the list we obtained in previous step and print it.

**Output:**

Average of all numbers where the corresponding string contains ‘m’ or ‘z’: 4