Assignment14

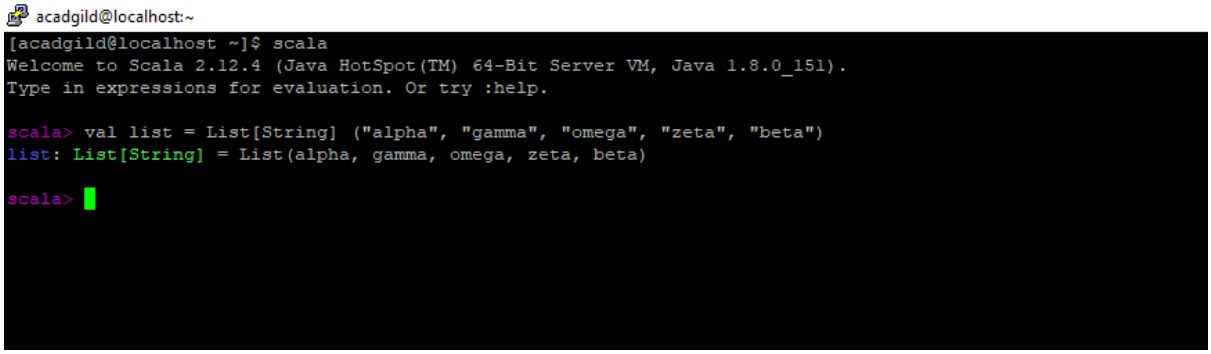
Problem Statement

Task 1

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

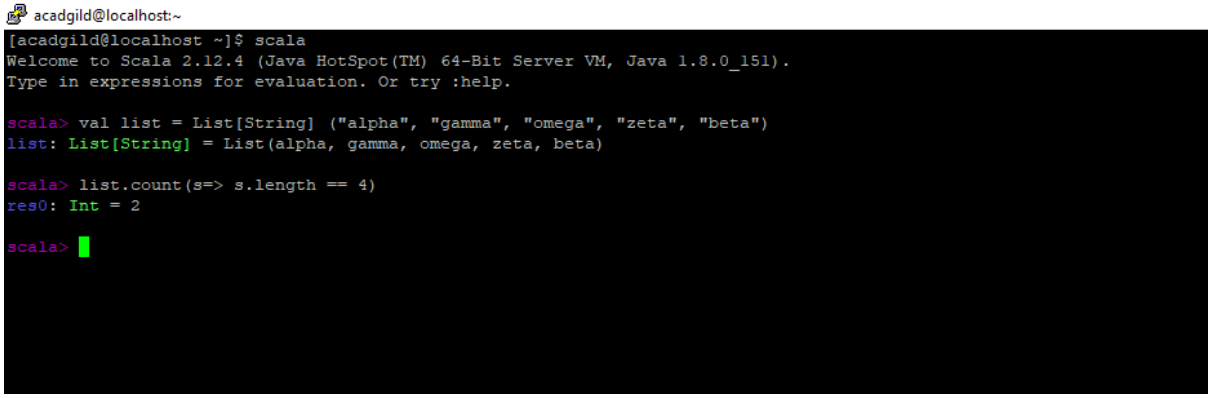
➔ Create List:

Command : val list = List[String} (“alpha”, “gamma”, “omega”, “zeta”, “beta”)



Find count of all strings with length 4.

➔ Command : list.count(s=> s.length == 4)



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

➔ Use map functions as below:

Command : list.map(s=> s.length)

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

scala> list.map(s=> s.length)
res6: List[Int] = List(5, 5, 5, 4, 4)

scala>
```

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

➔ Command : list.count(s=> s.contains(‘m’))

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

scala> list.count(s=>s.contains('m'))
res0: Int = 2

scala>
```

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

➔ Command : list.count(s=> s(0) == ‘a’)

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

scala> list.count(s=> s(0) == 'a')
res5: Int = 1

scala>
```

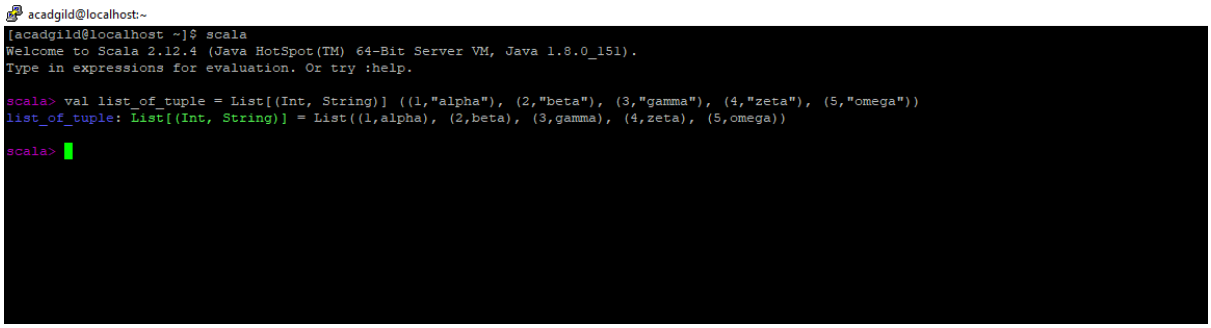
Task 2

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’))

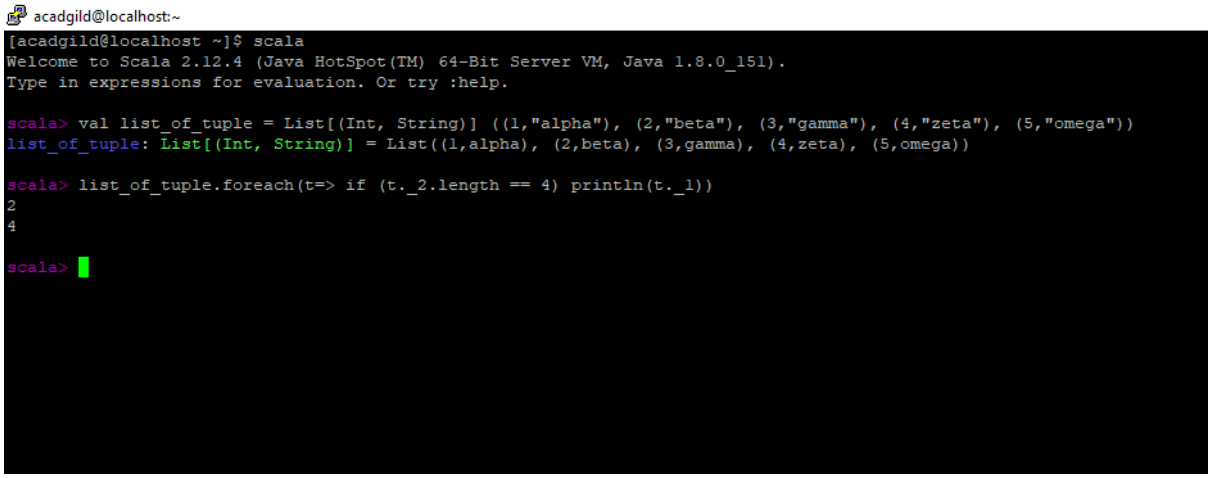
➔ Create a list_of_tuple using command below:

Command : val list_of_tuple = List[(Int, String)] ((1,"alpha"), (2,"beta"), (3, "gamma"), (4, "zeta"), (5, "omega"))



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

➔ Command: list_of_tuple.foreach(t=> if (t._2.length == 4) println(t._1))



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

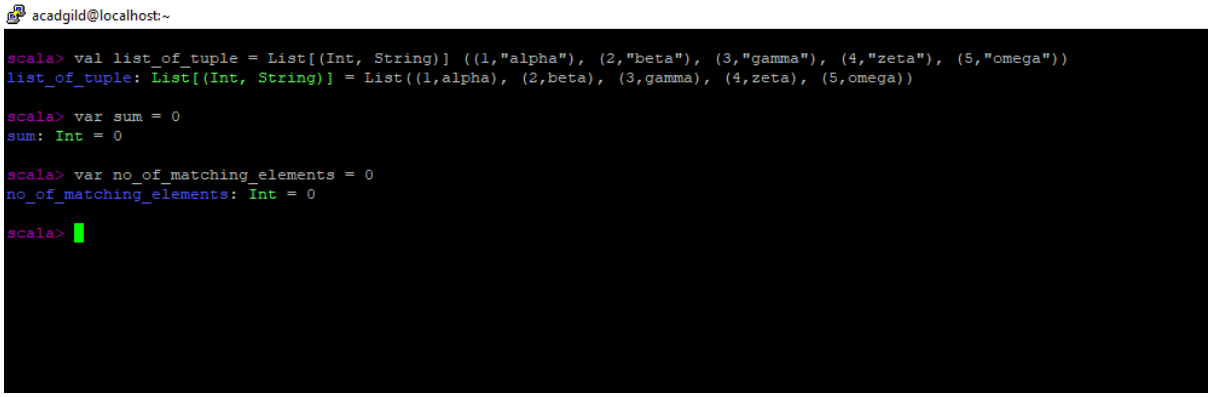
Create a list_of_tuple using command below:

➔ Command : val list_of_tuple = List[(Int, String)] ((1,"alpha"), (2,"beta"), (3, "gamma"), (4, "zeta"), (5, "omega"))

Create two variables sum and no_of_matching_elements and initialize them to 0

➔ var sum = 0

➔ var no_of_matching_elements = 0



Iterate over the list of tuples and sum the numbers and increment no_of_matching_elements the for which string value contains either alphabet ‘m’ or ‘z’

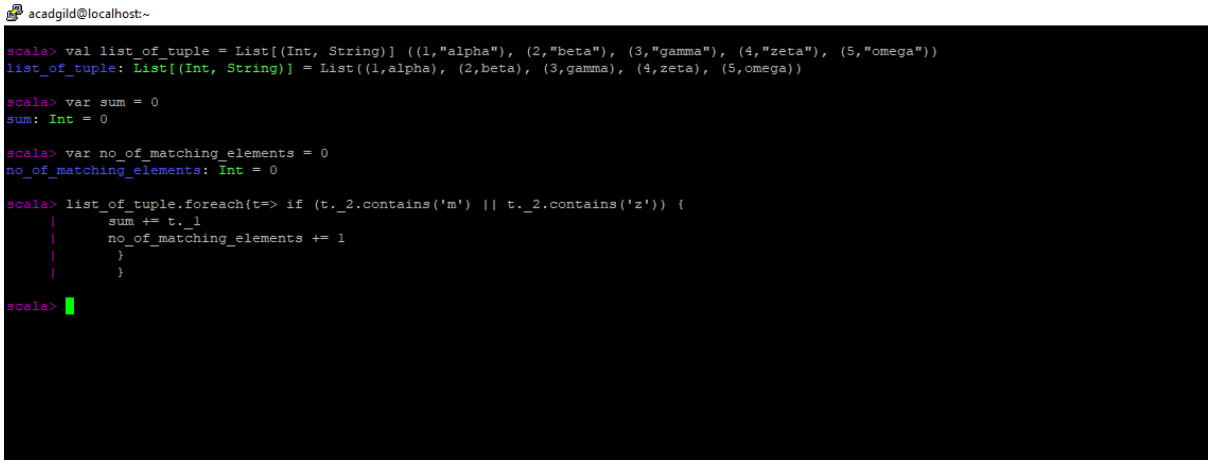
➔ Command : list_of_tuple.foreach{t=> if (t._2.contains('m') || t._2.contains('z')) {

| sum += t._1

| no_of_matching_elements += 1

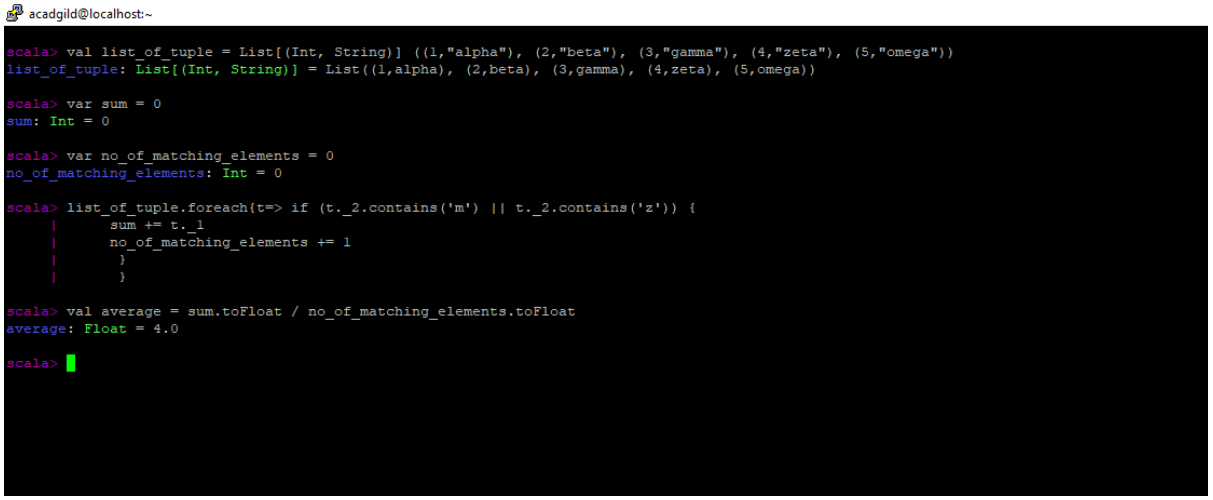
| }

| }



Calculate average by dividing sum by no_of_matching_element and print the average

➔ Command : val average = sum.toFloat / no_of_matching_elements.toFloat



➔ Command : println(average)