

Assignment 14

Task 1

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

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

acadgild@localhost:~

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

scala> █
```

- Find count of all strings with length 4.

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

`list.count(s=>s.length==4)`

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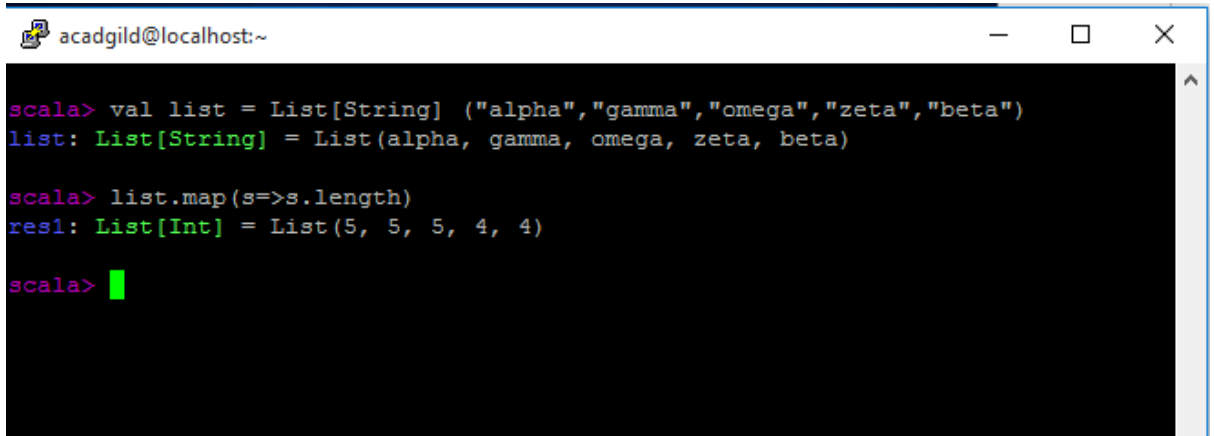
```
scala> val list = List[String] ("alpha","gamma","omega","zeta","beta")
list: List[String] = List(alpha, gamma, omega, zeta, beta)

scala> list.count(s=>s.length==4)
res0: Int = 2

scala> █
```

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

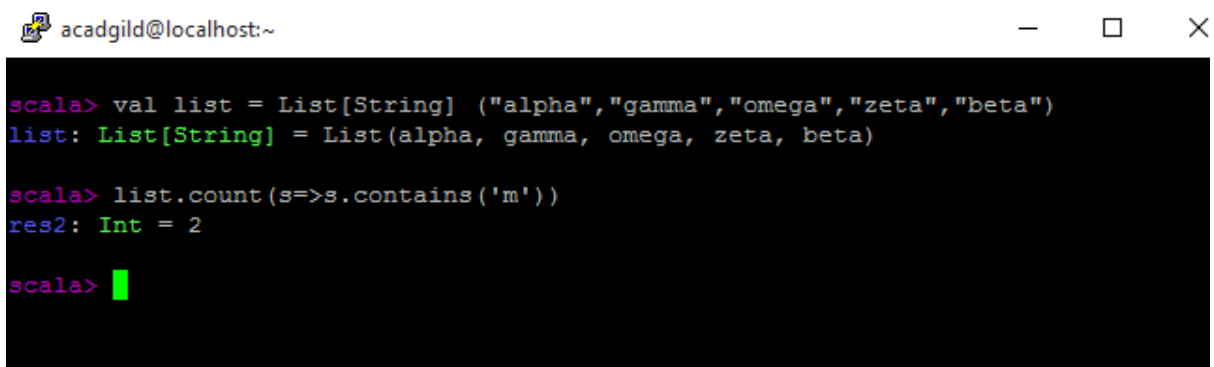
```
val list = List[String] ("alpha", "gamma", "omega", "zeta", "beta")  
list.map(s=>s.length)
```



```
acadgild@localhost:~  
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)  
res1: List[Int] = List(5, 5, 5, 4, 4)  
  
scala> █
```

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

```
val list = List[String] ("alpha", "gamma", "omega", "zeta", "beta")  
list.count(s=>s.contains('m'))
```

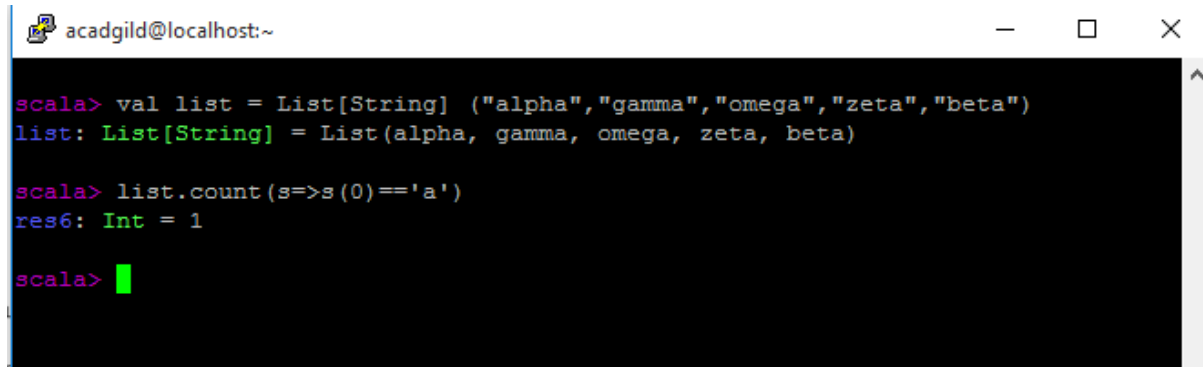


```
acadgild@localhost:~  
scala> val list = List[String] ("alpha","gamma","omega","zeta","beta")  
list: List[String] = List(alpha, gamma, omega, zeta, beta)  
  
scala> list.count(s=>s.contains('m'))  
res2: Int = 2  
  
scala> █
```

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

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

```
list.count(s=>s(0)=='a')
```



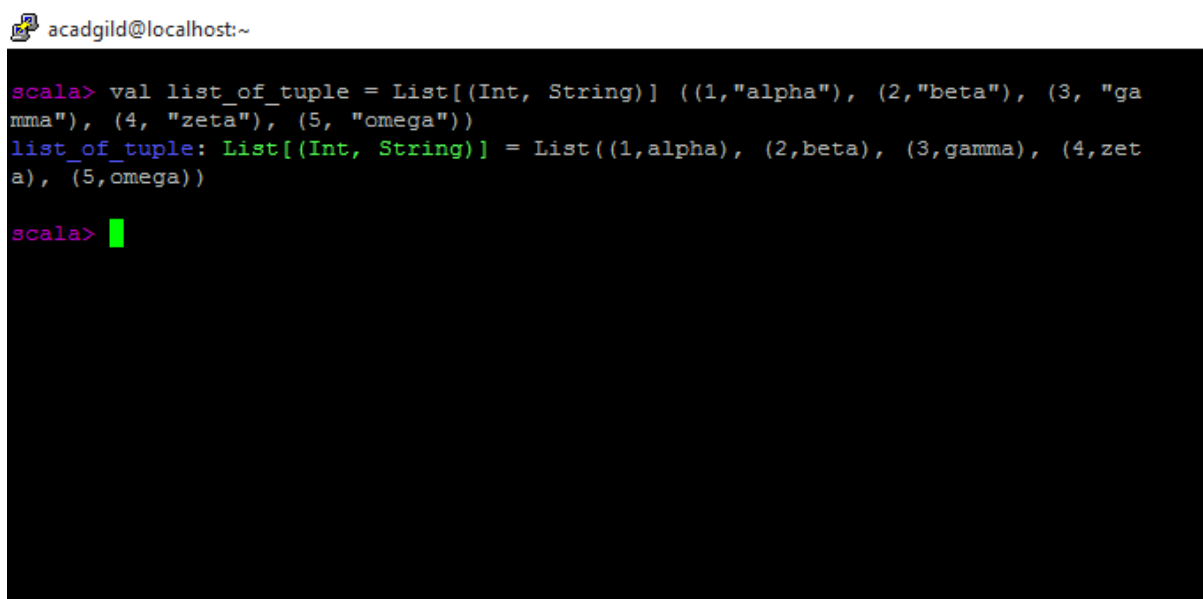
```
acadgild@localhost:~  
scala> val list = List[String] ("alpha","gamma","omega","zeta","beta")  
list: List[String] = List(alpha, gamma, omega, zeta, beta)  
  
scala> list.count(s=>s(0)=='a')  
res6: Int = 1  
  
scala>
```

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'))

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



```
acadgild@localhost:~  
scala> val list_of_tuple = List[(Int, String)] ((1,"alpha"), (2,"beta"), (3, "ga  
mma"), (4, "zeta"), (5, "omega"))  
list_of_tuple: List[(Int, String)] = List((1,alpha), (2,beta), (3,gamma), (4,zet  
a), (5,omega))  
  
scala>
```

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

Step1: Create a list_of_tuple using command below:

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

Step2: Use foreach to iterate over the list of tuples, print the number for which string length is 4 as below

```
list_of_tuple.foreach(t=> if (t._2.length == 4) println(t._1))
```

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

scala> list_of_tuple.foreach(t=>if(t._2.length==4) println(t._1))
2
4

scala>
```

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

Step1: Create a list_of_tuple using command below:

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

Step2: Create two variables sum and no_of_matching_elements and initialize them to 0

```
var sum = 0
```

```
var no_of_matching_elements = 0
```

Step3: 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'

```
list_of_tuple.foreach{t=> if (t._2.contains('m') || t._2.contains('z')) {
    | sum += t._1
    | no_of_matching_elements += 1
    | }
    | }
```

Step4: Calculate average by dividing sum by no_of_matching_element and print the average

```
val average = sum.toFloat / no_of_matching_elements.toFloat
println(average)
```

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

scala> var sum=0
sum: Int = 0

scala> var no_of_matching_elements=0
no_of_matching_elements: Int = 0

scala> list_of_tuple.foreach{t=>if(t._2.contains('m')||t._2.contains('z')){
    | sum+=t._1
    | no_of_matching_elements+=1
    | }
    | }

scala> val average = sum.toFloat/no_of_matching_elements.toFloat
average: Float = 4.0

scala> █
```