

ASSIGNMENT

Task1: Create a list of strings

a. Count the string with length 4

→ Command used: `val list1 = List(alpha, gamma, omega, zeta, beta)`

→ `list1.filter(s => s.length == 4)`

→ `list1.count(s => s.length == 4)`

```
scala> list1
res90: List[String] = List(alpha, gamma, omega, zeta, beta)

scala> list1.filter(s => s.length == 4)
res91: List[String] = List(zeta, beta)

scala> list1.count(s => s.length == 4)
res92: Int = 2

scala> █
```

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

→ Command used: `val list2 = list1.map(_.length)`

```
scala> list1
res22: List[String] = List(alpha, gamma, omega, zeta, beta)

scala> list1.map(_.length)
res23: List[Int] = List(5, 5, 5, 4, 4)

scala> val list1[Int] = list1.map(_.length)
<console>:12: error: not found: type list1
    val list1[Int] = list1.map(_.length)
      ^

scala> val list2 = list1.map(_.length)
list2: List[Int] = List(5, 5, 5, 4, 4)

scala> list2
res24: List[Int] = List(5, 5, 5, 4, 4)

scala> █
```

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

➔ Command used: `list1.count(s => s.contains("m"))`

```
scala> list1.count(s=> s.contains("m"))
| )
res101: Int = 2
scala>
```

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

➔ Command used: `list1.count(s => s.startsWith("a"))`

```
scala> list1.count(s=> s.startsWith("a"))
res104: Int = 1
scala>
```

Task2: create a list of tuples

➔ Command used: `val ListTuple = List[(Int, String)]((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

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

```
acadgild@localhost:~  
scala> val ListTuple = List[(int, String)] ((1,"alpha"), (2,"beta"), (3, "gamma"), (4, "zeta"), (5, "omega"))  
<console>:11: error: not found: type int  
    val ListTuple = List[(int, String)] ((1,"alpha"), (2,"beta"), (3, "gamma"), (4, "zeta"), (5, "omega"))  
                        ^  
scala> val ListTuple = List[(Int, String)] ((1,"alpha"), (2,"beta"), (3, "gamma"), (4, "zeta"), (5, "omega"))  
ListTuple: List[(Int, String)] = List((1,alpha), (2,beta), (3,gamma), (4,zeta), (5,omega))  
scala> ListTuple.foreach(t => if(t._2.length ==4) println(t._1))  
2  
4  
scala>  
scala>  
scala>
```

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

➔ command used: `var sum = 0`

`var total_matching_numbers = 0`

`ListTuple.foreach(t =>
t._2.contains("m") || t._2.contains('z')){`

`Sum+=t._1`

`Total_matching_numbers+=1}}`

`Val average = sum/total_matching_numbers`

`average`

```
scala> ListTuple
res78: List[(Int, String)] = List((1,alpha), (2,beta), (3,gamma), (4,zeta), (5,omega))

scala> var sum = 0
sum: Int = 0

scala> var total_matching_elements = 0
total_matching_elements: Int = 0

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

scala> val average = sum/total_matching_elements println(average)
<console>:13: error: value println is not a member of Int
      val average = sum/total_matching_elements println(average)
                                                    ^

scala> val average = sum/total_matching_elements
average: Int = 4

scala> average
res80: Int = 4

scala> █
```