

ASSIGNMENT 14.1

Task 1

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

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

scala> 
```

1. Find count of all strings with length 4.

```
scala> strings.count( s=> s.length==4)
res2: Int = 2

scala> strings.filter( s=> s.length==4)
res3: List[String] = List(zeta, beta)
```

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

```
scala> strings
res8: List[String] = List(alpha, gamma, omega, zeta, beta)

scala> strings.map(_.length)
res9: List[Int] = List(5, 5, 5, 4, 4)
```

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

```
scala> strings
res18: List[String] = List(alpha, gamma, omega, zeta, beta)

scala> strings.count(s => s.contains("m"))
res19: Int = 2

scala> strings.filter(s => s.contains("m"))
res20: List[String] = List(gamma, omega)
```

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

```
scala> strings
res23: List[String] = List(alpha, gamma, omega, zeta, beta)

scala> strings.count(s => s.startsWith("a"))
res24: Int = 1

scala> strings.filter(s => s.startsWith("a"))
res25: List[String] = List(alpha)
```

Task 2

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

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

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

```
scala> tuple
res31: List[(Int, String)] = List((1,alpha), (2,beta), (3,gamma), (4,zeta), (5,omega))

scala> val B = tuple.filter(x => x._2.length == 4)
B: List[(Int, String)] = List((2,beta), (4,zeta))

scala> B.map(_._1).foreach(println)
2
4
```

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

```
scala> tuple
res35: List[(Int, String)] = List((1,alpha), (2,beta), (3,gamma), (4,zeta), (5,omega))

scala> val avg = tuple.filter(s => s._2.contains("m") || s._2.contains("z"))
avg: List[(Int, String)] = List((3,gamma), (4,zeta), (5,omega))

scala> avg.map(_._1).sum/avg.size.toDouble
res36: Double = 4.0
```