

Scala programming Assignment 12.3

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'))

For this assignment, we are creating a list of tuples 'list' in Scala as below: In the tuple, the first element is Int, second element is String,

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

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

- we need to iterate over the tuple and find the length of each string, if any string is having length 4, then we are printing the Integer value of the tuple.
- The iteration is done using foreach. In the below code we are iterating over the list l, e corresponds to a single item, that is a single tuple (c, n) within the list, where the 1st element c → Int and second element n → String.

```
list.foreach { e => val (c, n) = e
    if (n.length == 4)
        println(c)
    }
```

Output: 2 4

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

- we need to iterate over the tuple and find if the string contains alphabet 'm' or 'z'. If any string is having m or z, then we are taking the Integer value of the tuple.
- The iteration is done using foreach. In the below code we are iterating over the list l, e corresponds to a single item, that is a single tuple (c, n) within the list, where the 1st element c → Int and second element n → String.
- To calculate the average, first we are finding the sum of the Int values where 'm' or 'z' exists, and also we are calculating count of Strings where 'm' or 'z' exists.
- Then calculating the average using sum/count.

```
var sum = 0;
var count = 0;
list.foreach { e => val (c, n) = e
    if (n.contains('m') || n.contains('z')) {
        count += 1;
        sum += c;
    }
}
val avg = sum/count;
```

Output: 4

Screenshot of IntelliJ Idea where the scala codes are run:

```
First_proj > src > main > scala > assignment12.scala
Test.scala x assignment12.scala x
assignment12 main(args: Array[String]) λ(e: Any)

24 println("*****Assignment 12.3*****")
25 val list = List((1, "alpha"), (2, "beta"), (3, "gamma"), (4, "zeta"), (5, "omega"));
26 println("Print the numbers where the corresponding string length is 4 ");
27 list.foreach { e =>
28     val (c, n) = e
29     if (n.length == 4)
30         println(c)
31 }
32
33 println("The average of all numbers, where the corresponding string contains alphabet 'm' or alphabet 'z'")
34 var sum = 0;
35 var count = 0;
36 list.foreach { e =>
37     val (c, n) = e
38     if (n.contains('m') || n.contains('z')) {
39         count += 1;
40         sum += c;
41     }
42 }
43 println("Sum: "+sum+" Count of occurrence: "+count);
44 val avg = sum/count;
45 println("Avg: "+avg);
46 }
```

Run assignment12

```
*****Assignment 12.3*****
Print the numbers where the corresponding string length is 4
2
4
The average of all numbers, where the corresponding string contains alphabet 'm' or alphabet 'z'
Sum: 12 Count of occurrence: 3
Avg: 4
```