Assignment 14

Task1

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

val x=List("alpha", "gamma", "omega", "zeta", "beta")

a. Find count of all strings with length 4.

val r= x.filter(s=>s.length==4)   //this will filter out the elements where the length of the elements of the list is 4

r.length;   //this will show the count of all the strings with length 4

O/P: 2

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

val n =x.map(s=>s.length)   //this will map the elements of the list with their lengths

println(n);   //this will print the above created list

O/P: List(5, 5, 5, 4, 4)

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

val y = x.filter(s=>s.contains('m'))   //this will filter the elements which contains 'm'

y.length;   //this will give the count of elements in above created list.

O/P: 2

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

val z = x.filter(s=>s.startsWith("a"))   //this will create a list which contains the elements of x, which starts with 'a'

z.length;   //this will give the count of elements in above created list.

O/P: 1

Task2

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 a = List((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.**

val r= a.filter(s=>s._2.length==4)   //this will create a list r which contains all the elements from a with length 4.

for (i<-r)   //for traversing through the above list
{
println(i._1)   //printing the first element of the corresponding tuples in 'i'
}

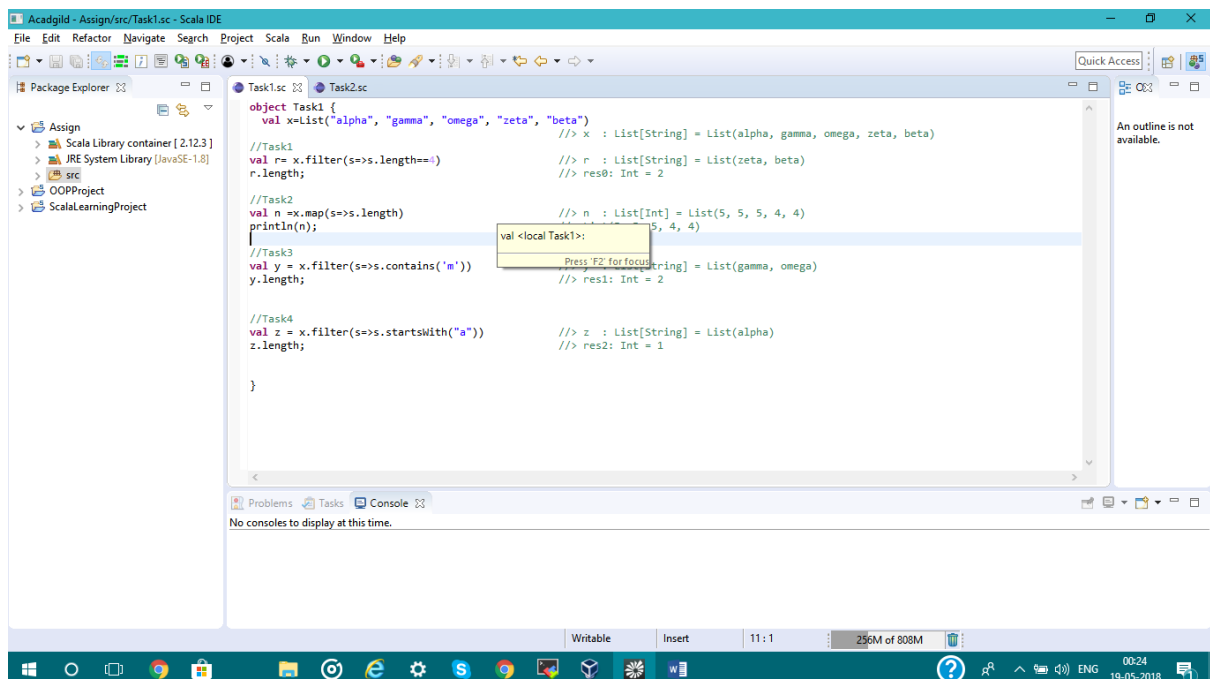**O/P: 2, 4**

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

```
 var count=0;                          //declaring a variable count
var sum =0;                            //declaring a variable sum
val x= a.filter(s=>s._2.contains('m') || s._2.contains('z'))
                              //this will filter the elements which
contains 'm' and create a list 'x'
 for (i<-x)                    //for traversing through 'x'
{
val temp = (i._1)             //this will store the first element of the tuple 'i'
println(temp);               //prints the above fetched elements
sum=sum+temp;                //summing up of the elements
count=count+1;               //counting the number of elements
}
println("average="+sum/count);         //calculating the average
```

O/P: average=4

Screenshots

Task1

Task2


```scala
object Task2 {
val a = List((1, "alpha"),(2, "beta"), (3, "gamma"), (4, "zeta"), (5, "omega"))
                                        //> a  : List[(Int, String)] = List((1,alpha), (2,beta), (3,gamma), (4,zeta), (5,
                                        //| omega))
//Task 1
val r= a.filter(s=>s._2.length==4)      //> r  : List[(Int, String)] = List((2,beta), (4,zeta))
for (i<-r)
{
println(i._1)                           //> 2
                                        //| 4
}

//Task2
var count=0;                            //> count  : Int = 0
var sum =0;                             //> sum  : Int = 0
val x= a.filter(s=>s._2.contains('m') || s._2.contains('z'))
                                        //> x  : List[(Int, String)] = List((3,gamma), (4,zeta), (5,omega))

for (i<-x)
{
val temp = (i._1)
println(temp);
sum=sum+temp;
count=count+1;
}                                       //> 3
                                        //| 4
                                        //| 5
println("average="+sum/count);          //> average=4
}
```