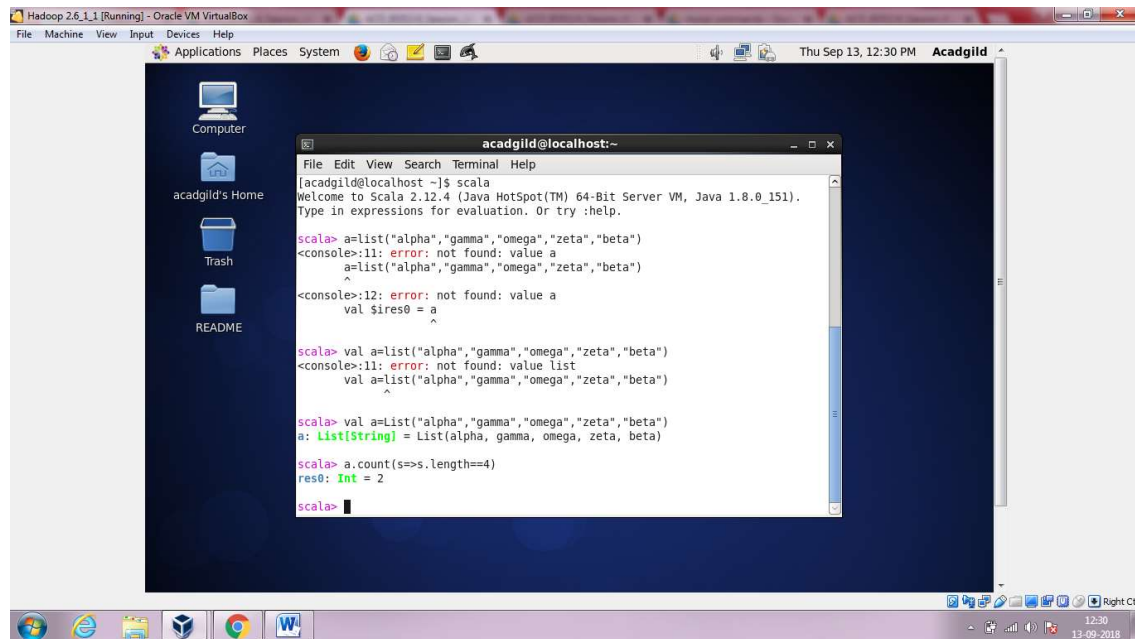


Task 1

Count list of string with length of 4



```
acadgild@localhost:~$ scala
Welcome to Scala 2.12.4 (Java HotSpot(TM) 64-Bit Server VM, Java 1.8.0_151).
Type in expressions for evaluation. Or try :help.

scala> a=list("alpha","gamma","omega","zeta","beta")
<console>:11: error: not found: value a
a=list("alpha","gamma","omega","zeta","beta")
^
<console>:12: error: not found: value a
val $res0 = a
^

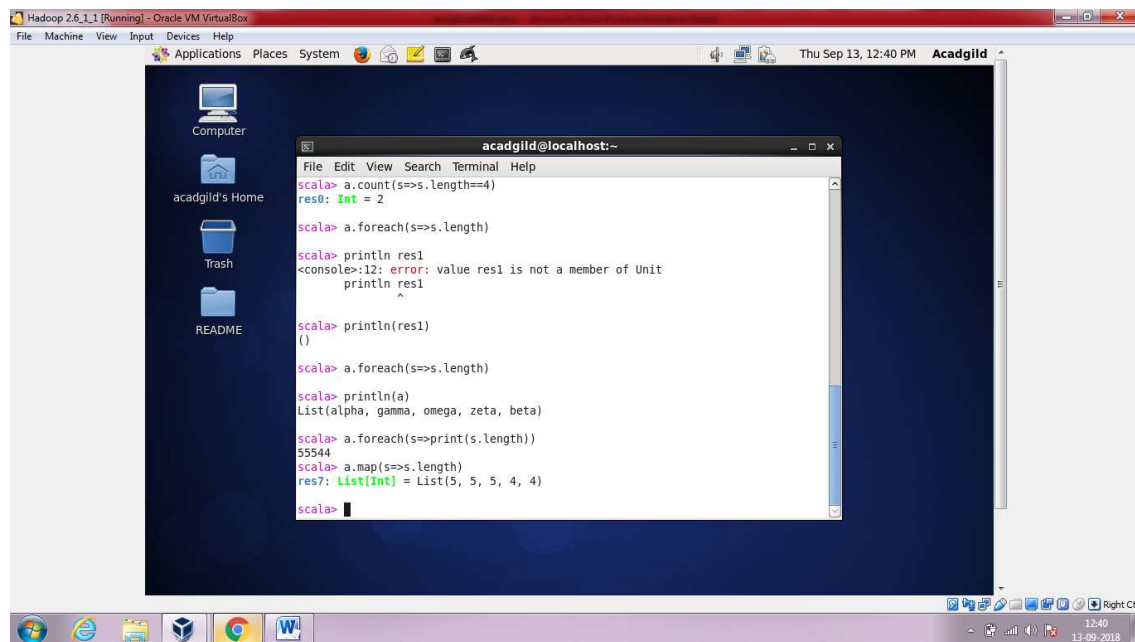
scala> val a=list("alpha","gamma","omega","zeta","beta")
<console>:11: error: not found: value list
val a=list("alpha","gamma","omega","zeta","beta")
^

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

scala> a.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.



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

scala> a.foreach(s=>s.length)
<console>:12: error: value res1 is not a member of Unit
println res1
^

scala> println(res1)
()

scala> a.foreach(s=>s.length)
List(alpha, gamma, omega, zeta, beta)

scala> a.foreach(s=>print(s.length))
55544

scala> a.map(s=>s.length)
res7: List[Int] = List(5, 5, 5, 4, 4)

scala>
```

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

```
res7: List[Int] = List(5, 5, 5, 4, 4)

scala> a.exists(s=>s== "a")
<console>:13: error: value exist is not a member of List[String]
      a.exists(s=>s== "a")
        ^

scala> a.exists(s=>s== "a")
res9: Boolean = false

scala> print(res9)
false

scala> a.forall(s=>s.exists("a"))
<console>:13: error: type mismatch;
 found   : String("a")
 required: Char => Boolean
      a.forall(s=>s.exists("a")
        ^

scala> a.count(s=>s.contains("m"))
res12: Int = 2

scala>
```

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

```
scala> a.count=a.forall(s=>s.startsWith("a"))
<console>:12: error: reassignment to val
      a.count=a.forall(s=>s.startsWith("a"))
        ^

<console>:13: error: missing argument list for method count in trait Traversable
Once
Unapplied methods are only converted to functions when a function type is expected.
You can make this conversion explicit by writing 'count _' or 'count(_)' instead of 'count'.
      val $ires1 = a.count
                        ^

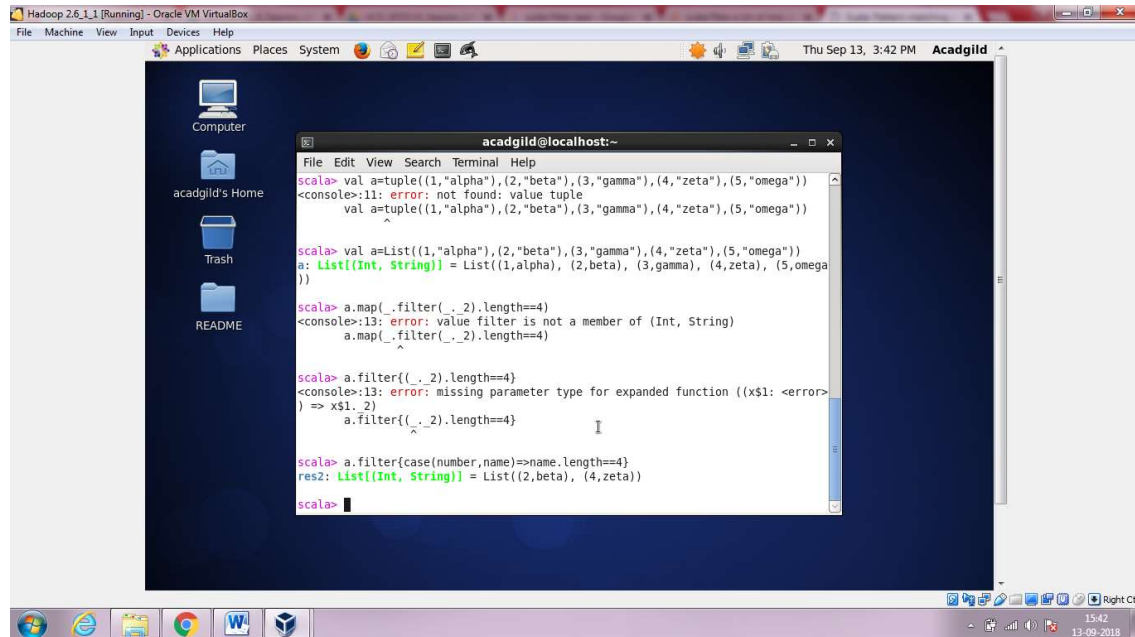
scala> a.forall(s=>s.startsWith("a"))
<console>:13: error: value startswith is not a member of String
      a.forall(s=>s.startswith("a"))
        ^

scala> a.count(s=>s.startWith("a"))
res17: Int = 1

scala>
```

Task2

print the numbers where the corresponding string length is 4.



The screenshot shows a terminal window titled 'acadgild@localhost:~' with the following Scala code and output:

```
scala> val a=tuple(1,"alpha"),(2,"beta"),(3,"gamma"),(4,"zeta"),(5,"omega")
<console>:11: error: not found: value tuple
    val a=tuple(1,"alpha"),(2,"beta"),(3,"gamma"),(4,"zeta"),(5,"omega")
           ^

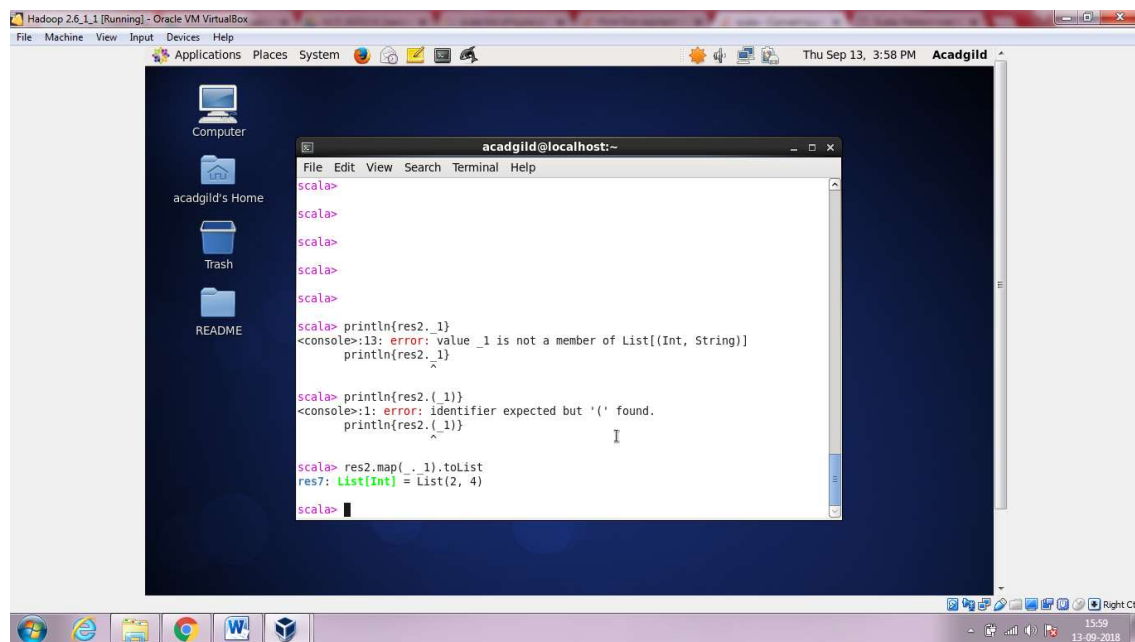
scala> val a=List(1,"alpha"),(2,"beta"),(3,"gamma"),(4,"zeta"),(5,"omega")
a: List[(Int, String)] = List((1,alpha), (2,beta), (3,gamma), (4,zeta), (5,omega))

scala> a.map(_.filter(_._2.length==4))
<console>:13: error: value filter is not a member of (Int, String)
    a.map(_.filter(_._2.length==4))
           ^

scala> a.filter(_._2.length==4)
<console>:13: error: missing parameter type for expanded function ((x$1: <error>) => x$1._2)
    a.filter(_._2.length==4)
           ^

scala> a.filter(case(number,name)=>name.length==4)
res2: List[(Int, String)] = List((2,beta), (4,zeta))

scala>
```



The screenshot shows a terminal window titled 'acadgild@localhost:~' with the following Scala code and output:

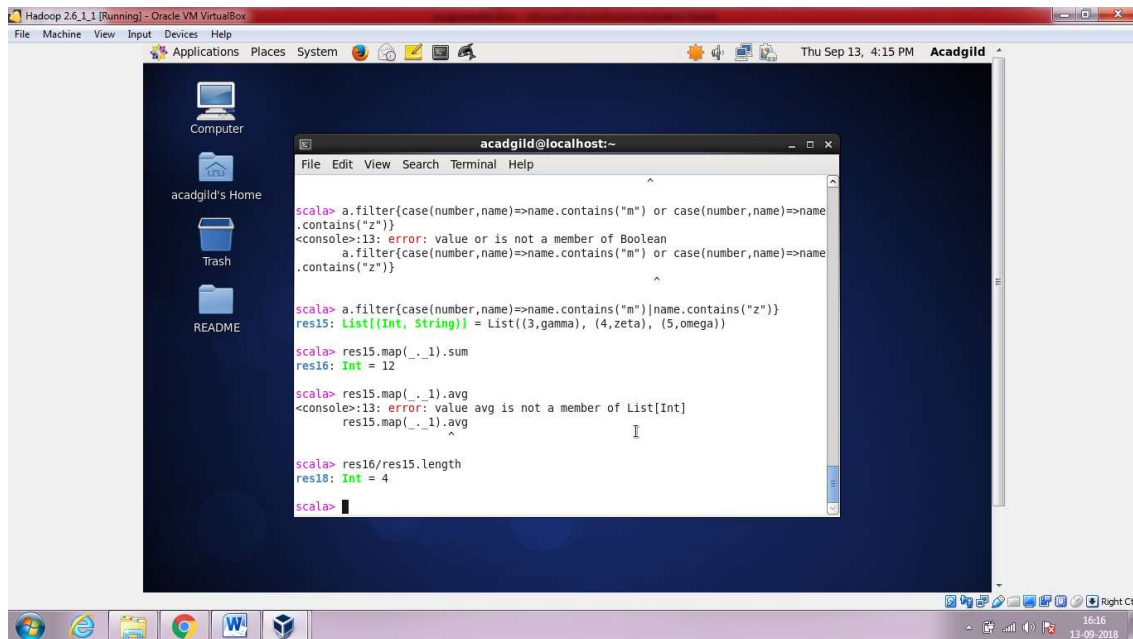
```
scala>
scala>
scala>
scala>
scala>
scala> println(res2._1)
<console>:13: error: value _1 is not a member of List[(Int, String)]
    println(res2._1)
               ^

scala> println(res2._1)
<console>:1: error: identifier expected but '(' found.
    println(res2._1)
               ^

scala> res2.map(_._1).toList
res7: List[Int] = List(2, 4)

scala>
```

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



The screenshot shows a virtual machine window titled "Hadoop 2.6.1.1 [Running] - Oracle VM VirtualBox". Inside the VM, there is a desktop environment with a terminal window open. The terminal window has a title bar "acadgild@localhost:~" and a menu bar "File Edit View Search Terminal Help". The terminal displays the following Scala code and its output:

```
scala> a.filter(case(number,name)=>name.contains("m") or case(number,name)=>name.contains("z"))
<console>:13: error: value or is not a member of Boolean
    a.filter(case(number,name)=>name.contains("m") or case(number,name)=>name.contains("z"))
    ^

scala> a.filter(case(number,name)=>name.contains("m")|name.contains("z"))
res15: List[(Int, String)] = List((3,gamma), (4,zeta), (5,omega))

scala> res15.map(_._1).sum
res16: Int = 12

scala> res15.map(_._1).avg
<console>:13: error: value avg is not a member of List[Int]
    res15.map(_._1).avg
    ^

scala> res16/res15.length
res18: Int = 4

scala>
```

The desktop environment includes icons for "Computer", "acadgild's Home", "Trash", and "README". The taskbar at the bottom shows various application icons and the system clock indicating "16:16 13-09-2018".