ASSIGNMENT 22.1

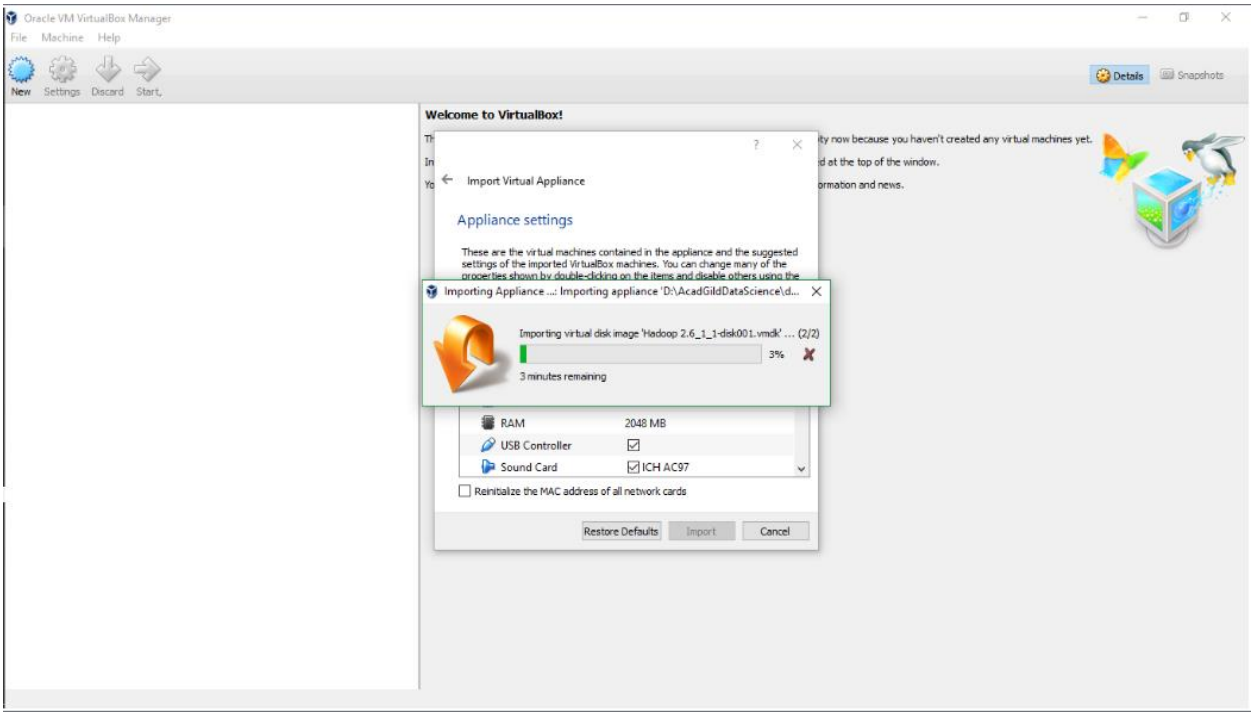
Task 1

/*

Follow the below link document steps to download and import AcadgildSpark VM in the Oracle VirtualBox. (64-bit VM 32-bit VM). NOTE: If your system is compatible with 64 bit VM, then please download the Acadgild Spark 64 Bit file,else download the Acadgild Spark 32 Bit file from the link.

*/

Answer: Please find below mentioned Screenshot for your reference.



Task 2

/*

This program finds the following for Given a list of strings - List[String] (“alpha”, “gamma”, “omega”, “zeta”, “beta”)

- find count of all strings with length 4

- convert the list of string to a list of integers, where each string is mapped to its corresponding length

- find count of all strings which contain alphabet ‘m’

- find the count of all strings which start with the alphabet ‘a’

*/

Answer:

```
//Given list data
var lst = List[String] ("alpha", "gamma", "omega", "zeta", "beta")

//2.1 Prints the count of all strings with length 4
var count_strings_length_4 = lst.count(s => s.length == 4 )
println("The count of all strings with length 4 is: "+ count_strings_length_4+"\n")

//2.2 Prints the list of integers where each string is mapped to its corresponding length
var list_of_length_string = lst.map(s => s.length)
println("The list of integers where each string is mapped to its corresponding length is:
"+list_of_length_string+"\n")

//2.3 Prints the count of all strings which contain alphabet 'm'
var count_strings_contains_m = lst.count(s => s.contains("m"))
println("The count of all strings which contain alphabet 'm' is: " + count_strings_contains_m+"\n")

//2.4 Prints the count of all strings which start with the alphabet 'a'
var count_strings_starts_with_a = lst.count(s => s.startsWith("a"))
println("The count of all strings which start with the alphabet 'a' is: "+count_strings_starts_with_a+"\n")
```

//OUTPUT

```
The count of all strings with length 4 is: 2
The list of integers where each string is mapped to its corresponding length is: List(5, 5, 5, 4, 4)
The count of all strings which contain alphabet 'm' is: 2
The count of all strings which start with the alphabet 'a' is: 1
lst: List[String] = List(alpha, gamma, omega, zeta, beta)
count_strings_length_4: Int = 2
list_of_length_string: List[Int] = List(5, 5, 5, 4, 4)
```

```
count_strings_contains_m: Int = 2

count_strings_starts_with_a: Int = 1
```

Task 3

```
/*

This program creates a Scala application to find the GCD of two numbers.

*/

class GCD

{

   def gcd(a: Int,b: Int): Int = {

      if(b ==0) a else gcd(b, a%b)

   }


}

var gcd = new GCD()

var a=25

var b=15

println("The gcd of " + a + " and " + b + " is :" + gcd.gcd(a,b) + "\n")

//OUTPUT

The gcd of 25 and 15 is :5


defined class GCD

gcd: GCD = GCD@63b83e67

a: Int = 25

b: Int = 15
```