Assignment 16.1

List of Integers

```
scala> val numb : List[Int] = List(1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
numb: List[Int] = List(1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
```

1. find the sum of all numbers

val total = numb.sum

```
scala> val numb : List[Int] = List(1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
numb: List[Int] = List(1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

scala> val total = numb.sum
total: Int = 55

scala>
```

2. find the total elements in the list

numb.length

```
scala> numb.length
res2: Int = 10

scala>
```

3. calculate the average of the numbers in the list

val avrg = numb.sum/numb.length

```
scala> val avrg = numb.sum/numb.length
avrg: Int = 5

scala>
```

4. find the sum of all the even numbers in the list

First we shall filter the numbers which are even by the command

val evenSum = numb.filter(a=> a%2 ==0)

Now to calculate the sum of the even numbers

val evenSum = numb.filter(a=> a%2 ==0).sum Sum of all the even numbers is 30

```
scala> val evenSum = numb.filter(a=> a%2 ==0)
evenSum: List[Int] = List(2, 4, 6, 8, 10)

scala> val evenSum = numb.filter(a=> a%2 ==0).sum
evenSum: Int = 30

scala>
```

5. find the total number of elements in the list divisible by both 5 and 3

First let us check the count of elements divisible by 3 and 5 each

numb.count(x=> x%3 == 0)

numb.count(x=> x%5 == 0)

Now let us get the count of elements divisible by 3 and 5 together

numb.count(x=> x%3 == 0 || x%5 == 0)

```
scala> numb.count(x => x % 3 == 0)
res12: Int = 3

scala> numb.count(x => x % 5 == 0)
res13: Int = 2

scala> numb.count(x => x % 3 == 0 || x % 5 == 0)
res14: Int = 5

scala>
```