ASSIGNMENT16.1

Given a list of numbers - List[Int] (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

- find the sum of all numbers

```
val list  = List(1, 2, 3, 4, 5, 6, 7, 8, 9, 10);
list.sum;
```

```
Type :help for more information.

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

scala> list.sum;
res0: Int = 55

scala>
```

- find the total elements in the list

```
val list  = List(1, 2, 3, 4, 5, 6, 7, 8, 9, 10);
list.length;
```

```
scala> list.length;
res2: Int = 10
```

- calculate the average of the numbers in the list

```
val list  = List(1, 2, 3, 4, 5, 6, 7, 8, 9, 10);
list.sum / list.size.toDouble;
```

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

scala> list.sum / list.size.toDouble;
res3: Double = 5.5
```

- find the sum of all the even numbers in the list

```
val list = List(1, 2, 3, 4, 5, 6, 7, 8, 9, 10);
list.filter(_ % 2 == 0).sum;
```

```
scala> list.filter(_ % 2 == 0).sum;
res4: Int = 30
```

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

```
val list = List(1, 2, 3, 4, 5, 6, 7, 8, 9, 10);
list.filter(i => i % 3 == 0 && i % 5 == 0)
```

```
scala> list.filter(i => i % 3 == 0 && i % 5 == 0)
res6: List[Int] = List()
```