

Iteration

EXERCISE: For loops

1. Write a program which calculates the average of five numbers, read from the keyboard. Test with the following lists.

3, 4, 5, 6, 7
1.0, -2.5, 1.0, -1.5, 1.0
2. Write a program to display 5 10 15 20 25 30 35 40
3. Write a program to read an integer value from the keyboard and print the next 10 integers and their squares.

EXERCISE: While loops

1. Write a program which calculates the average of a list of numbers read from the keyboard. The program should terminate when a 0 is entered. Test with the following lists.

3, 4, 5, 0
1.0, -2.5, 1.0, -1.5, 1.0, 0
0

2. Add the following line inside the body of the while loop just before the next number is read:

```
TextIO.putln("total=" + total +  
            ", number=" + number + ", count=" + count);
```

The output from this line can help you trace the execution of the program. Test with each of the lists above again, and answer the following:

- How many times was the loop executed?
 - What happened to the value of count?
 - What happened to the value of number?
 - What happened to the value of total?
3. Write a program which allows a maximum of three attempts to enter a password correctly.