Applications Programming

Lab - Basic Patterns

The process:

1. Read the specification
2. Fill in a words-to-code table
3. Use the table to write the code
4. Submit your project to PLATE

Tutor demo
Main class: `AverageDays`

Specification: Each month has 31, 28, 31, 30, 31, 30, 31, 31, 30, 31, 30, 31 days respectively. Show the average number of days for the 12 months.

Words-to-code table

Word	Pattern or code
Each month has 31, 28, 31, 30, 31, 30, 31, 31, 30, 31, 30, 31 days respectively.	
Show	
the average number of days	
for the 12 months.	

Sample I/O

```
Average days per month = 30.416666666666668
```

Your tutor will work through a solution to this specification. Copy down this solution and submit it to PLATE.

Specification #1
Main class: `AverageValue`

Read in integers until the user enters -1. If there was at least one integer, show the average value.

Words-to-code table

Word	Pattern or code
Read in integers	
until the user enters -1.	
If there was at least one integer	
show	
the average value.	

Sample I/O

```
Value: 3
Value: 4
Value: 5
Value: 6
Value: -1
Average = 4.5
```

Specification #2

Main class: CountVowels

Read in characters until the user enters a full stop '.'. Show the number of lowercase vowels.

Word	Pattern or code
Read in characters	
Until the user enters a full stop '.'	
Show	
the number of	
lowercase vowels.	

Sample I/O:

```
Character: t
Character: r
Character: e
Character: a
Character: s
Character: u
Character: r
Character: e
Character: .
Vowel count = 4
```

Specification #3

Main class: MiddleAverage

Read in integers until the user enters -1. If there were at least 3 values, show the average excluding the biggest and smallest number.

Words-to-code table

Word	Pattern or code
Read in integers	
until the user enters -1.	
If there were at least 3 values	
show	
the average excluding the biggest and smallest number.	

Sample I/O:

```
Value: 2
Value: 5
Value: 6
```

```
Value: 7
Value: 8
Value: 87
Value: -1
Middle average = 6.5
```