- If you have questions during this lab do not hesitate to ask your lab demonstrator.
- All classes **must** have comments at the beginning containing your name and student number.

Consider a statistical sample of N observations. Consider the following formulas for the mean and variance:

Sample mean	$\frac{\Sigma X}{N}$
Sample variance	$s^2 = \frac{\Sigma X^2 - \frac{(\Sigma X)^2}{N}}{N-1}$

Write a program, Mean`Variance`, that calculates the mean and variance for a sample of N=20 integer values.

Your program must use a Scanner object (i.e. the keyboard), prompt the user once for the set of 20 values, and calculate/display the sample mean and variance.

Sample interaction:

Program: `Enter 20 values`

User: `1 3 2 4 5 6 7 8 9 3 6 6 6 6 6 9 8 7 6 5`

Program:

```
The sample mean is 5.65

The sample variance is 4.765789473684208
```

For the above data, note that

ΣX = 1 + 3 + 2 + 4 + ...

ΣX^2 = 1*1 + 3*3 + 2*2+ 4*4 + ...

Your program must work for any set of 20 values.

Submit the file Mean`Variance.java` to the email for **your lab section** with **Subject** `Lab5.` E.g. if you are registered in lab ACS-1903L-070 then the email address to send to is 1903L-070@acs.uwinnipeg.ca