Chapter 8 Function

The first example in the slide:
mean median mode

they are "average" in different senses.

mean is averaging the values
median is the "middle" value
mode is the most "often" value

Example

13, 18, 13, 14, 13, 16, 14, 21, 13

mean is (13 + 18 + 13 + 14 + 13 + 16 + 14 + 21 + 13) ÷ 9 = 15

median is 13, 13, 13, 13, <14>, 14, 16, 18, 21 = 14

mode is 13

Excercise

1) write a program consists of two functions: get input n values, findmax.

2) write a program to get input and use findmax to sort the set.

3) write a program to sort input set and then reverse it then print it out.

To do excercises in grader (CH08_XX) you must be familiar with 2D array (matrix). Here is how to create a 2D array (list of list)

create a table of size m, n

you need to "initialize" values in the table


```
table = [ [ 0 for i in range(m) ]
for j in range(n) ]
```

Here is the code to go over each element in the table


```
for i in range(m):
    for j in range(n):
        table[i][j] = ...
```

Excercise

4) create a matrix 5 x 5 with the value and print it out.

1 2 3 4 5
6 7 8 9 10
...

5) use the matrix in 4) and double each element. print it out.

6) use the matrix in 4) and transpose it. print it out.

for 5) and 6) make 4) as a function.

Summary

Making a snippet of code into a function is important. it helps "abstract" your code.

A function has "local" parameters.

Name your function to give its meaning (usually a kind of verb).

By now you must be comfortable with all types of data: list, tuple etc.

Have Fun!

Prabhas Chongstitvatana

21 March 2016