

P2. Write a program with a *While* loop to scale down a variable value: ask a user for (1) a base number *b* (as float) and (2) a target ceiling *c* (as float), keep executing  $b = b/2$  for each iteration until  $b < c$ , then report the results.

Recall: *While* statement has syntax

*While condition:*

*# while body (execute only when condition is true)*

*# statements to work in each iteration*

*# Next statement after while–statement.*

Example 1:

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Base number: **20**

Ceiling: **1**

$b = 10.0$

$b = 5.0$

$b = 2.5$

$b = 1.25$

$b = 0.625$

Final  $b = 0.625$  after 5 iteration(s).

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Example 2:

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Base number:7

Ceiling:10

Final b = 7.0 after 0 iteration(s).

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Example 3:

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Base number:20

Ceiling:10

b = 10.0

b = 5.0

Final b = 5.0 after 2 iteration(s).

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