November 8, 2018

- Void Function:
  - Group of statements within a program for performing a specific task
    - call function when you need to perform the task
- Value-Returning Function:
  - Similar to void function, returns a value
    - Value returned to part of program that called the function when function finishes executing
      - Examples:
      - Input Function
- Standard Library
  - Library of pre-written function that comes with Python
    - Library functions perform tasks that programmers commonly need
      - Example: print, input, range
      - Viewed by programmers as a black box
- Some library functions built into Python interpreter
  - To use, just call the function
- Modules
  - Files that stores functions of the standard library
    - Help organize library functions not built into the interpreter
    - Copied to computer when you install Python
  - To call a function stored in a module, need to written an import statement
    - Written at the top of the program
    - Format: import module_name

Figure 5-19   A library function viewed as a black box
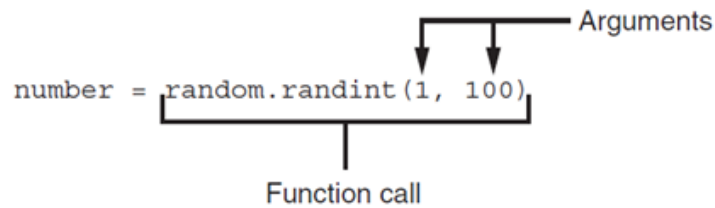

- Random numbers are useful in a lot of programming tasks
- Random Module
  - Includes library functions for working with random numbers
- Dot Notation
  - Notation for calling a function belonging to a module
    - Format: module_name.function_name()
- Randint Function:
  - Generates a random number in the range provided by the arguments
    - Returns the random number to part of program called the function
    - Returned integer can be used anywhere that an integer would be used
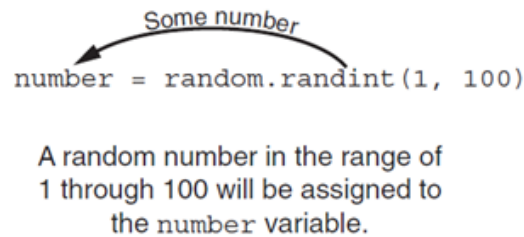   - You can experiment with the function interactive mode

import random

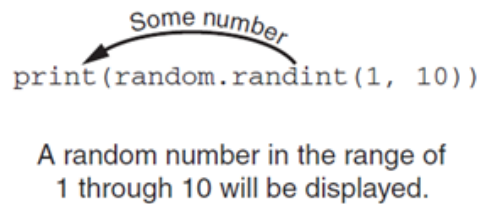**Figure 5-20**   A statement that calls the `random` function


```
1 import random
2 number = random.randint(1,1001)
3 print (number)
```

Figure 5-21   The `random` function returns a value

A random number in the range of
1 through 100 will be assigned to
the `number` variable.

Figure 5-22   Displaying a random number

A random number in the range of
1 through 10 will be displayed.

- RandRange Function
  - Similar to range function, but returns randomly selected integer from the resulting sequence
    - Same arguments as for the range funtion
- Random Funtion
  - Returns a random float in the range of 0.0 and 1.0
    - Does not receive arguments
- Uniform Function:
  - returns a random float but allows user to specify range