[301] Using Functions

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Learning Objectives Today

Learn how to use functions:

- Calling functions
- Passing arguments
- Getting values back

Modules:

- What are they?
- How to import them?
- Attribute operator

Inspection:

- How to discover the functions in a module
- How to learn what a function is meant to do

Please read Chapter 3 of Think Python

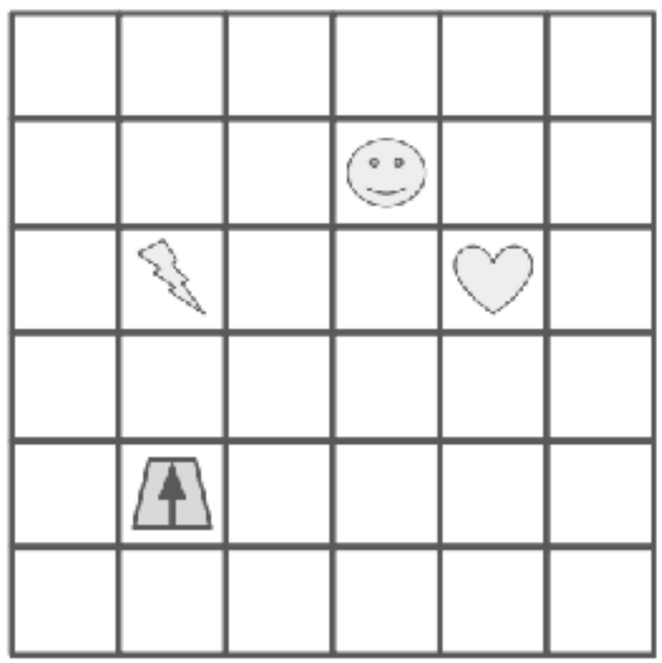
Main Code:

1. Put 2 in the “moves” box
2. Perform the steps under “Move Code”, then continue to step 3
3. Rotate the robot 90 degrees to the right (so arrow points to right)
4. Put 3 in the “moves” box
5. Perform the steps under “Move Code”, then continue to step 6
6. Whatever symbol the robot is sitting on, write that symbol in the “resut” box

Move Code:

A. If “moves” is 0, stop performing these steps in “Move Code”, and go back to where you last were in “Main Code” to complete more steps
B. Move the robot forward one square, in the direction the arrow is pointing
C. Decrease the value in “moves” by one
D. Go back to step A

Functions are like “mini programs”, as in our robot worksheet problem



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“Move Code” is a function

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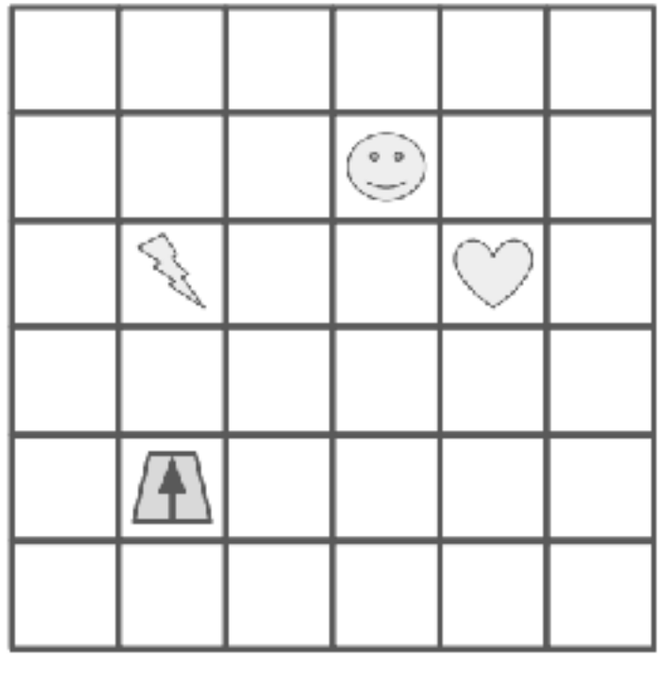

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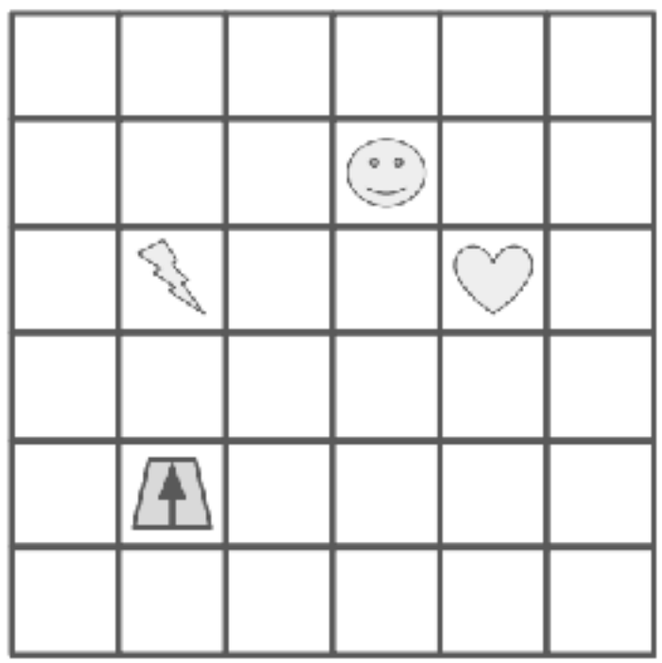

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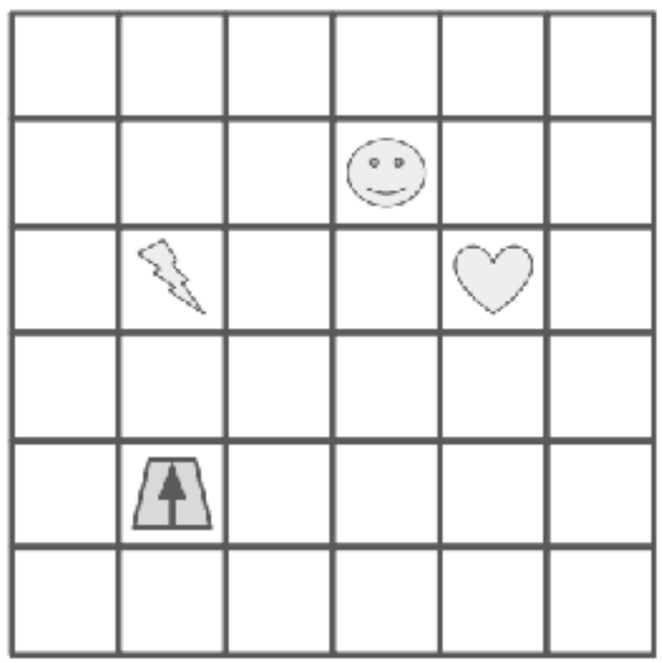

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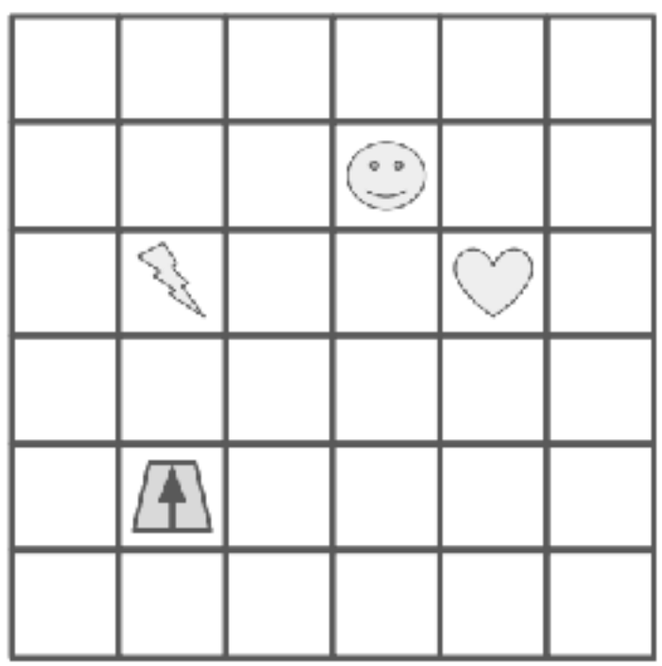

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next lecture, we'll learn how to write our own new functions

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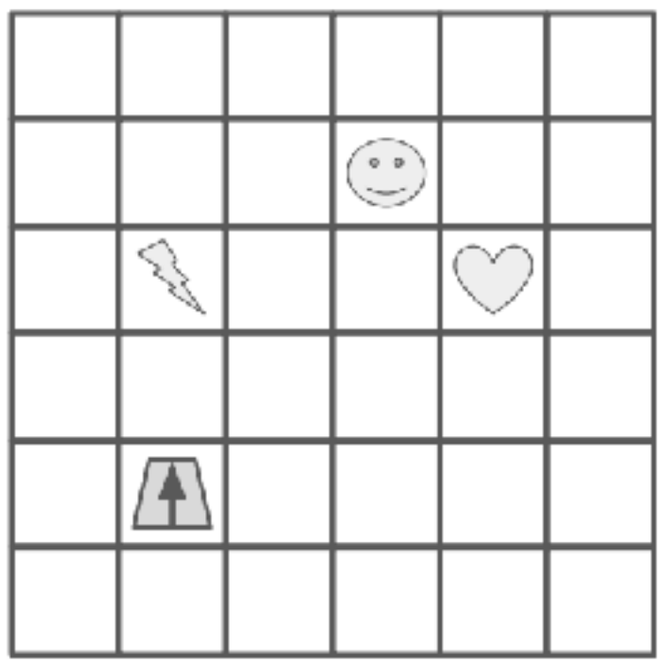

print(“hello”)

result = f(x)

```
print(“hello”)
result = f(x)
```

ALWAYS: function’s name

print(“hello”)

result = f(x)

ALWAYS: followed by parentheses

arguments

print(“hello”)

result = f(x)

SOMETIMES: with one or more arguments

print(“hello”)

result = f(x)

SOMETIMES: producing a result

demos for rest of lecture