

Exercise 35: Branches and Functions



You have learned if-statements, functions, and lists. Now it's time to bend your mind. Type this in, and see if you can figure out what it's doing.



```
from sys import exit
 1
                                                                            \blacksquare
 2
                                                                          PREVIOUS
 3
     def gold_room():
 4
         print "This room is full of gold. How much do you take?"
                                                                           5
 6
         choice = raw_input("> ")
                                                                           NEXT
         if "0" in choice or "1" in choice:
 7
 8
             how_much = int(choice)
                                                                           45
 9
         else:
                                                                           HELP
10
             dead("Man, learn to type a number.")
11
                                                                            Follow
12
         if how much < 50:</pre>
13
             print "Nice, you're not greedy, you win!"
14
             exit(0)
15
         else:
             dead("You greedy bastard!")
16
17
18
19
     def bear_room():
20
         print "There is a bear here."
         print "The bear has a bunch of honey."
21
         print "The fat bear is in front of another door."
22
         print "How are you going to move the bear?"
23
24
         bear moved = False
25
         while True:
26
27
             choice = raw input("> ")
28
             if choice == "take honey":
29
30
                 dead("The bear looks at you then slaps your face off.")
             elif choice == "taunt bear" and not bear_moved:
31
32
                 print "The bear has moved from the door. You can go through it now."
33
                 bear moved = True
34
             elif choice == "taunt bear" and bear moved:
35
                 dead("The bear gets pissed off and chews your leg off.")
             elif choice == "open door" and bear moved:
36
37
                 gold_room()
38
             else:
                 print "I got no idea what that means."
39
40
41
42
     def cthulhu room():
43
         print "Here you see the great evil Cthulhu."
44
         print "He, it, whatever stares at you and you go insane."
45
         print "Do you flee for your life or eat your head?"
46
47
         choice = raw_input("> ")
48
49
         if "flee" in choice:
50
             start()
         elif "head" in choice:
51
52
             dead("Well that was tasty!")
53
         else:
54
             cthulhu_room()
55
56
57
     def dead(why):
```

```
print why, "Good job!"
58
59
         exit(0)
60
61
     def start():
62
         print "You are in a dark room."
         print "There is a door to your right and left."
63
         print "Which one do you take?"
64
65
66
         choice = raw_input("> ")
67
         if choice == "left":
68
             bear_room()
69
         elif choice == "right":
70
71
             cthulhu_room()
72
         else:
73
             dead("You stumble around the room until you starve.")
74
75
76
     start()
```

What You Should See

Here's me playing the game:

```
$ python ex35.py
You are in a dark room.
There is a door to your right and left.
Which one do you take?
> left
There is a bear here.
The bear has a bunch of honey.
The fat bear is in front of another door.
How are you going to move the bear?
> taunt bear
The bear has moved from the door. You can go through it now.
> open door
This room is full of gold. How much do you take?
You greedy bastard! Good job!
```

Study Drills

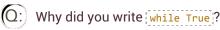
- 1. Draw a map of the game and how you flow through it.
- 2. Fix all of your mistakes, including spelling mistakes.
- 3. Write comments for the functions you do not understand.
- 4. Add more to the game. What can you do to both simplify and expand it?
- 5. The gold_room has a weird way of getting you to type a number. What are all the bugs in this way of doing it? Can you make it better than what I've written? Look at how int() works for clues.

Common Student Questions



Q: Help! How does this program work!?

When you get stuck understanding a piece of code, simply write an English comment above every line explaining what that line does. Keep your comments short and similar to the code. Then either diagram how the code works or write a paragraph describing it. If you do that you'll get it.



That makes an infinite loop.



On many operating systems a program can abort with exit(0), and the number passed in will indicate an error or not. If you do exit(1) then it will be an error, but exit(0) will be a good exit. The reason it's backward from normal boolean logic (with 0==False is that you can use different numbers to indicate different error results. You can do exit(100) for a different error result than exit(2) or exit(1).



(O:) Why is raw_input() sometimes written as raw_input('> ')?

The parameter to raw_input is a string that it should print as a prompt before getting the user's input.

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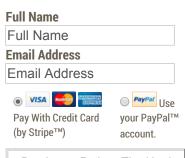
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