"Dragon Realm"

Invent Your Own Computer Games with Python

Introduction

- **"Dragon Realm"**

  - Sample Run

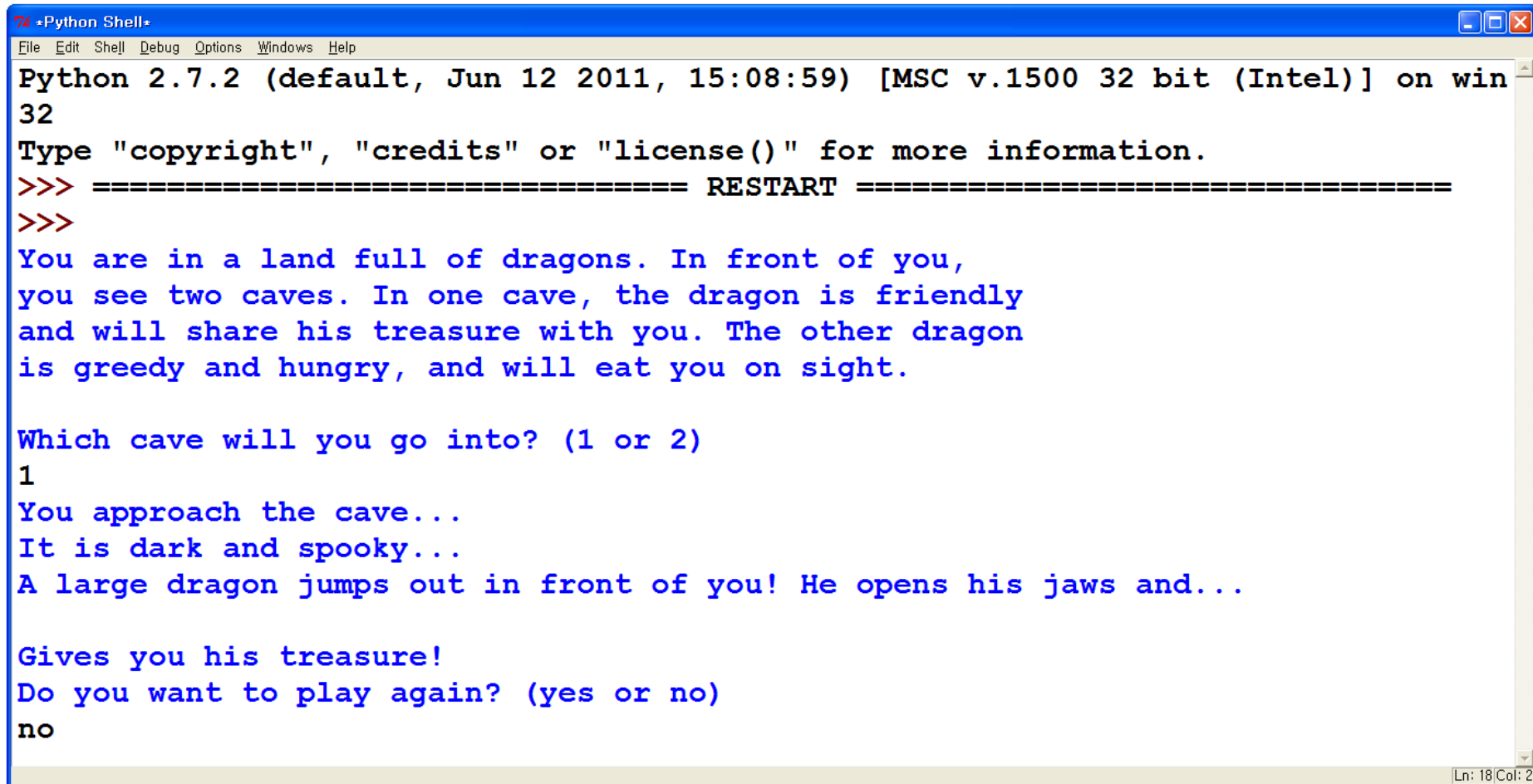 - Source Code

- **Code Explanation**

  - `def` statements

  - The Colon :

  - Step by Step, One More Time

  - Designing the Program

- **Things Covered In This Chapter**

"Dragon Realm"

■ Sample Run

```
Python Shell

File  Edit  Shell  Debug  Options  Windows  Help

Python 2.7.2 (default, Jun 12 2011, 15:08:59) [MSC v.1500 32 bit (Intel)] on win
32
Type "copyright", "credits" or "license()" for more information.
>>> ============================ RESTART ============================
>>>
You are in a land full of dragons. In front of you,
you see two caves. In one cave, the dragon is friendly
and will share his treasure with you. The other dragon
is greedy and hungry, and will eat you on sight.

Which cave will you go into? (1 or 2)
1
You approach the cave...
It is dark and spooky...
A large dragon jumps out in front of you! He opens his jaws and...

Gives you his treasure!
Do you want to play again? (yes or no)
no
                                                                    Ln: 18 Col: 2
```

3

"Dragon Realm"

- ## Source Code (1/2)

```python
import random
import time

def displayIntro():
    print 'You are in a land full of dragons. In front of you,'
    print 'you see two caves. In one cave, the dragon is friendly'
    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave
```

"Dragon Realm"

- **Source Code (2/2)**

```
displayIntro()


caveNumber = chooseCave()


checkCave(caveNumber)


print 'Do you want to play again? (yes or no)'
playAgain = raw_input()
```

Code Explanation

■ **Two `import` statements.**

```
import  random
import  time
```

- Import random module.

- Time-related functions that the **time module** includes.

Code Explanation

■ **Defining the `displayIntro()` Function**

```python
def displayIntro():
    print 'You are in a land full of dragons. In front of you,'
    print 'you see two caves. In one cave, the dragon is friendly'
    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print
```

- **`def` statement**

  – made up of the **`def` keyword**, followed by a **function name** with **parentheses**, and then a **colon** (the : sign).

  – There is a block after the statement called the def-block.

Code Explanation

- **`def` statement**
  - parts of a `def` statement

```
def keyword          parentheses
     ↓                    ↓
   def chooseCave():
              ↑          ↑
      function name    colon
```

Code Explanation

- **`def` statement**
  - **creating**, or **defining**, a new function.
  - When we *call* this function
    - the code inside the def-block will be executed.
  - also say we define variables.

  - **`def` statement** doesn't execute the code right now
    - it only defines what code is executed when we call the `displayIntro()` function later in the program.

Code Explanation

- **Defining the `chooseCave()` Function**

  - defining another function called `chooseCave`.

    ```python
    def chooseCave():
    ```

  - Inside the `chooseCave()` function

    ```python
    cave = ''
    while cave != '1' and cave != '2':
    ```

    - create a **new variable** called `cave` and store a blank string in it.
    - then we will start a `while` loop.
      - contains a **new operator**

Code Explanation

- **Boolean Operators**

  - **Compare** two Boolean values

  - **Evaluate** to a single Boolean value.

    – Boolean expressions are always either **True or False.**

  - **The `and` Boolean operator**

    – combines two Boolean values to produce a new Boolean value.

Code Explanation

■ **Boolean Operators**

- how the `and` operator works.

- If the Boolean values on both sides of the `and` keyword are **`True`**

    – then the expression with the and operator **evaluates to `True`**.

    – This sentence is **True.**

    > "Cats have whiskers and dogs have tails."

    – This sentence is **False.**

    > "Cats have whiskers and dogs have wings"

Code Explanation

■ **Evaluating an Expression**

```
while cave != '1' and cave != '2':
```

- Two expressions connected by the `and` Boolean operator.
  - We first **evaluate** these expressions to get their Boolean.
  - Then we evaluate the Boolean values with the `and` operator.

Code Explanation

■ **Evaluating an Expression**

- The steps of how the interpreter evaluates the condition.

```
while cave != '1' and cave != '2':

while '' != '1' and cave != '2':

while True and cave != '2':

while True and '' != '2':

while True and True:

while True:
```

Code Explanation

- **Experimenting with the `and` and `or` Operators**

and operator

```
>>> True and True
True
>>> True and False
False
>>> False and True
False
>>> False and False
False
```

or operator

```
>>> True or True
True
>>> True or False
True
>>> False or True
True
>>> False or False
False
```

Code Explanation

■ **Experimenting with the `not` Operators**

```
>>> not True
False
>>> not False
True
>>> True not
SyntaxError: invalid syntax
```

- use **both the `and` and `not` operators** in a single expression

```
>>> True and not False
True
```

Code Explanation

- **Truth Tables**
  - The **and** operator's truth table.

A and B is	Entire statement
True and True is	True
True and False is	False
False and True is	False
False and False is	False

Code Explanation

- **Truth Tables**

  - The `or` operator's truth table.

A or B is	Entire statement
True or True is	True
True or False is	True
False or True is	True
False or False is	False

Code Explanation

■ **Truth Tables**

- The **not** operator's truth table.

not A	Entire statement
not True	Flase
not False	True

Code Explanation

■ **Getting the Player's Input**

```python
while cave != '1' and cave != '2':
    print 'Which cave will you go into? (1 or 2)'
    cave = raw_input()
```

- If this condition evaluates to **True**
  - enter the **while-block again.**

- But if the player typed in 1 or 2
  - This causes the condition to evaluate to **False.**
  - the program execution will continue on **past the while loop.**

Code Explanation

■ **Return Values**

- **return keyword**

  ```
  return cave
  ```

  – It **returns the string** that is stored in cave.

  – Only found inside def-blocks.

  – Once the return statement is executed

  » we immediately jump out of the def-block.

Code Explanation

- **Variable Scope**

  - Variables **created inside** the function

    - forgotten after the execution leaves the function.

    - The scope of the variable is inside in the function's block.

  - The scope of variables **created outside** of functions

    - outside of all functions in the program.

Code Explanation

■ **Variable `cave` is defined**

```
def chooseCave():
    cave = ''
```

- It is important to know **when a variable is defined.**
    - because that is how we know the **variable's scope.**

- when the execution left the `chooseCave()` function
    - the `cave` variable was forgotten and destroyed.
    - that is, left `chooseCave()`'s local scope.

Code Explanation

■ **Defining the `checkCave()` Function**

```
def checkCave(chosenCave):
```

- put the text `chosenCave` in between the parentheses.

- **Parameters**
  - The variable names in between the parentheses.
  - for some functions , we would pass an argument in between the parentheses.

```
>>> import random
>>> str(5)
'5'
>>> random.randint(1, 20)
9
```

Code Explanation

- **Quiz**

  - Imagine we had a short program that looked like this.

```python
def sayHello(name):
    print 'Hello, ' + name

print 'Say hello to Alice.'
fizzy = 'Alice'
sayHello(fizzy)
print 'Do not forget to say hello to Bob.'
sayHello('Bob')
```

Code Explanation

■ **Quiz**

• Imagine we had a short program that looked like this.

```python
def sayHello(name):
    print 'Hello, ' + fizzy

print 'Say hello to Alice.'
fizzy = 'Alice'
sayHello(fizzy)
print 'Do not forget to say hello to Bob.'
sayHello('Bob')
```

Code Explanation

■ **Local Variables and Global Variables with the Same Name**

- Now look at this program, which is a **bit different.**

```python
def spam(myName):
    print 'Hello, ' + myName
    myName = 'Waffles'
    print 'Your new name is ' + myName

myName = 'Albert'
spam(myName)
print 'Howdy, ' + myName
```

Code Explanation

■ **Where to Put Function Definitions**

- A function's definition has to come before you call the function.

```
sayGoodBye()

def sayGoodBye():
    print 'Good bye!'
```

```
Traceback (most recent call last):
  File "<pyshell#3>", line 2, in <module>
    sayGoodBye()
NameError: name 'sayGoodBye' is not defined
```

Code Explanation

- **Where to Put Function Definitions**

  - To fix this, put the function definition before the function call.

```python
def sayGoodBye():
    print 'Good bye!'

sayGoodBye()
```

```
Good bye!
```

Code Explanation

■ **Displaying the Game Results**

- **The `time.sleep()` function**

```python
print 'You approach the cave...'
time.sleep(2)
```

  – Imported the **time module.**

  – The time module has a function called `sleep()`

    » will pause the program for a few seconds.

    » to pause for exactly 2 seconds.

Code Explanation

■ Displaying the Game Results

- Print some more text and wait again for another 2 seconds.

- These short pauses add suspense to the game.

```python
print 'It is dark and spooky...'
time.sleep(2)
print 'A large dragon jumps out in front of you! He opens his jaws and...'
print
time.sleep(2)
```

Code Explanation

- **Deciding Which Cave has the Friendly Dragon**

```
friendlyCave = random.randint(1, 2)
```

– **randomly chose** which cave had the friendly dragon in it.

– the `random.randint()` function will return either the integer **1 or 2**.

– store this value in a variable called `friendlyCave`.

Code Explanation

■ **Deciding Which Cave has the Friendly Dragon**

- check if the **integer 1 or 2** is equal to the cave randomly selected.

```python
if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
```

- can't compare strings and integers with the == sign.

  – '1' does not equal 1.

  – So we are passing `friendlyCave` to the **str() function**.

- we could have also had this line instead

```python
if int (chosenCave) == friendlyCave:
```

Code Explanation

- **Deciding Which Cave has the Friendly Dragon**

  - **`else` keyword**

    ```
    else:
        print 'Gobbles you down in one bite!'
    ```

    – always comes after the if-block.

    – If this condition is true then execute the if-block or else execute the else-block."

    – Remember to put the colon (the : sign) after the else keyword.

Code Explanation

- ■ **The Colon :**

  - always place a colon at the end of `if`, `else`, `while`, and `def` statements.

    - This line is where our program really begins.

    ```
    playAgain = 'yes'
    ```

    - Here is the beginng of a `while` loop.

    ```
    while playAgain == 'yes' or playAgain == 'y':
    ```

Code Explanation

- **Calling the Functions**
  - Jumps to the first line in the `displayIntro()` function.

    ```
    displayIntro()
    ```

  - The return value is stored in a new variable named `caveNumber`.

    ```
    caveNumber = chooseCave()
    ```

  - This line calls our `checkCave()` function with the argument of caveNumber's value.

    ```
    checkCave(caveNumber)
    ```

Code Explanation

■ **Asking the Player to Play Again**

- The variable `playAgain`

  - stores the string that the user typed in.

  - then we reach the end of the while-block

  - so the program rechecks the while statement's condition (`playAgain == 'yes' or playAgain == 'y'`)

```python
print('Do you want to play again? (yes or no)')
playAgain = input()
```

Code Explanation – step by step

```python
import time

def displayIntro():
    print 'You are in a land full of dragons. In front of you,'
    print 'you see two caves. In one cave, the dragon is friendly'
    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
```

Code Explanation – step by step

```python
import random


def displayIntro():
    print 'You are in a land full of dragons. In front of you,'
    print 'you see two caves. In one cave, the dragon is friendly'
    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print


def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave


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    print 'You approach the cave...'
```

Code Explanation – step by step

```python
import random
import time

    print 'You are in a land full of dragons. In front of you,'
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Code Explanation – step by step

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    print

    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
```

Code Explanation – step by step

```python
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':
```

Code Explanation – step by step

```python
def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'


while playAgain == 'yes' or playAgain == 'y':
```

Code Explanation – step by step

```python
playAgain = 'yes'
```

```python
    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Code Explanation – step by step

Global Scope
playAgain == 'yes'

```python
playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Code Explanation – step by step

```python
import random
import time
```

```python
    print 'You are in a land full of dragons. In front of you,'
    print 'you see two caves. In one cave, the dragon is friendly'
    print 'and will share his treasure with you. The other dragon'
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def chooseCave():
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    return cave
```

Code Explanation – step by step

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import time

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```

Code Explanation – step by step

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import random
import time

def displayIntro():
    print 'You are in a land full of dragons. In front of you,'

    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave
```

Global Scope

```
playAgain == 'yes'
```

Code Explanation – step by step

```python
import random
import time

def displayIntro():
    print 'You are in a land full of dragons. In front of you,'
    print 'you see two caves. In one cave, the dragon is friendly'
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    print

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave
```

Global Scope

`playAgain == 'yes'`

Code Explanation – step by step

```python
import random
import time

def displayIntro():
    print 'You are in a land full of dragons. In front of you,'
    print 'you see two caves. In one cave, the dragon is friendly'
    print 'and will share his treasure with you. The other dragon'

    print

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave
```

Global Scope

```
playAgain == 'yes'
```

Code Explanation – step by step

```python
import random
import time

def displayIntro():
    print 'You are in a land full of dragons. In front of you,'
    print 'you see two caves. In one cave, the dragon is friendly'
    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'


def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave
```

Global Scope

```
playAgain == 'yes'
```

Code Explanation – step by step

```python
import random
import time

def displayIntro():
    print 'You are in a land full of dragons. In front of you,'
    print 'you see two caves. In one cave, the dragon is friendly'
    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print

    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave
```

Global Scope

```
playAgain == 'yes'
```

Code Explanation – step by step

```python
import random
import time

def displayIntro():
    print 'You are in a land full of dragons. In front of you,'
    print 'you see two caves. In one cave, the dragon is friendly'
    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print

def chooseCave():

    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave
```

Global Scope
playAgain == 'yes'

```python
import random
import time

def displayIntro():
    print 'You are in a land full of dragons.
    print 'you see two caves. In one cave, the
    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print

def chooseCave():
    cave = ''

        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave
```

Global Scope

```
playAgain == 'yes'
```

Lobal Scope

```
cave == ''
```

```python
import random
import time

def displayIntro():
    print 'You are in a land full of dragons.
    print 'you see two caves. In one cave, the
    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':

        cave = raw_input()

    return cave
```

Global Scope
playAgain == 'yes'

Lobal Scope
cave == ''

Code Explanation – step by step

```python
import random
import time

def displayIntro():
    print 'You are in a land full of dragons.
    print 'you see two caves. In one cave, the
    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'

    return cave
```

Global Scope

`playAgain == 'yes'`

Lobal Scope

`cave == ''`

Code Explanation – step by step

```python
import random
import time

def displayIntro():
    print 'You are in a land full of dragons.
    print 'you see two caves. In one cave, the
    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print

def chooseCave():
    cave = ''

        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave
```

Global Scope

`playAgain == 'yes'`

Lobal Scope

`cave == '3'`

Code Explanation – step by step

```python
import random
import time

def displayIntro():
    print 'You are in a land full of dragons.
    print 'you see two caves. In one cave, the
    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':

        cave = raw_input()

    return cave
```

Global Scope
`playAgain == 'yes'`

Lobal Scope
`cave == '3'`

Code Explanation – step by step

```python
import random
import time

def displayIntro():
    print 'You are in a land full of dragons.
    print 'you see two caves. In one cave, the
    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'


    return cave
```

Global Scope

`playAgain == 'yes'`

Lobal Scope

`cave == '3'`

Code Explanation – step by step

```python
import random
import time

def displayIntro():
    print 'You are in a land full of dragons.
    print 'you see two caves. In one cave, the
    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print

def chooseCave():
    cave = ''

        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave
```

Global Scope

```
playAgain == 'yes'
```

Lobal Scope

```
cave == '2'
```

Code Explanation – step by step

```python
def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He op
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
```

Global Scope

```
playAgain == 'yes'
```

Lobal Scope

```
cave == '2'
```

Code Explanation – step by step

```python
    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()
```

Global Scope
playAgain == 'yes'
caveNumber == '2'

```python
    print 'Do you want to play again? (yes or no)'
```

```
        return cave

        print 'You approach the cave...'
        time.sleep(2)
        print 'It is dark and spooky...'
        time.sleep(2)
        print 'A large dragon jumps out in front of you! He opens his jaws and...'
        print
        time.sleep(2)

        friendlyCave = random.randint(1, 2)

        if chosenCave == str(friendlyCave):
            print 'Gives you his treasure!'
        else:
            print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':
```

Global Scope
playAgain == 'yes'
caveNumber == '2'

```
        return cave

def checkCave(chosenCave):

        time.sleep(2)
        print 'It is dark and spooky...'
        time.sleep(2)
        print 'A large dragon jumps out in front of you! H
        print
        time.sleep(2)


        friendlyCave = random.randint(1, 2)

        if chosenCave == str(friendlyCave):
                print 'Gives you his treasure!'
        else:
                print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':
```

Global Scope

```
playAgain == 'yes'
caveNumber == '2'
```

Lobal Scope

```
chosenCave == '2'
```

Code Explanation – step by step

```python
        return cave

def checkCave(chosenCave):
    print 'You approach the cave...'

    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! H
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':
```

Global Scope
playAgain == 'yes'
caveNumber == '2'

Lobal Scope
chosenCave == '2'

Code Explanation – step by step

```python
    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)

    time.sleep(2)
    print 'A large dragon jumps out in front of you! H
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':
```

Global Scope
playAgain == 'yes'
caveNumber == '2'

Lobal Scope
chosenCave == '2'

Code Explanation – step by step

```python
    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'

    print 'A large dragon jumps out in front of you! H
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

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playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':
```

Global Scope
playAgain == 'yes'
caveNumber == '2'

Lobal Scope
chosenCave == '2'

Code Explanation – step by step

```python
        return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)

    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':
```

Global Scope
playAgain == 'yes'
caveNumber == '2'

Lobal Scope
chosenCave == '2'

Code Explanation – step by step

```python
    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! H
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':
```

Global Scope
playAgain == 'yes'
caveNumber == '2'

Lobal Scope
chosenCave == '2'

```
        return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! H
    print
```

Global Scope
playAgain == 'yes'
caveNumber == '2'

Lobal Scope
chosenCave == '2'

```
    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
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while playAgain == 'yes' or playAgain == 'y':
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```python
        return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! H
    print
    time.sleep(2)
```

Global Scope
playAgain == 'yes'
caveNumber == '2'

Lobal Scope
chosenCave == '2'

```python
    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':
```

```python
        return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! H
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)
```

```python
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':
```

Global Scope
playAgain == 'yes'
caveNumber == '2'

Lobal Scope
chosenCave == '2'
friendlyCave == 2

Code Explanation – step by step

```python
        return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! H
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):

    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':
```

Global Scope
playAgain == 'yes'
caveNumber == '2'

Lobal Scope
chosenCave == '2'
friendlyCave == 2

Code Explanation – step by step

```python
friendlyCave = random.randint(1, 2)

if chosenCave == str(friendlyCave):
    print 'Gives you his treasure!'
else:
    print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    playAgain = raw_input()
```

Global Scope
playAgain == 'yes'
caveNumber == '2'

Code Explanation – step by step

```python
friendlyCave = random.randint(1, 2)

if chosenCave == str(friendlyCave):
    print 'Gives you his treasure!'
else:
    print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
```

Global Scope
playAgain == 'y'
caveNumber == '2'

Code Explanation – step by step

```python
friendlyCave = random.randint(1, 2)

if chosenCave == str(friendlyCave):
    print 'Gives you his treasure!'
else:
    print 'Gobbles you down in one bite!'

playAgain = 'yes'


    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again?  (yes or no)'
    playAgain = raw_input()
```

Global Scope
playAgain == 'y'
caveNumber == '2'

Code Explanation – step by step

```python
friendlyCave = random.randint(1, 2)

if chosenCave == str(friendlyCave):
    print 'Gives you his treasure!'
else:
    print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':
```

Global Scope
playAgain == 'y'
caveNumber == '2'

```python
caveNumber = chooseCave()

checkCave(caveNumber)

print 'Do you want to play again? (yes or no)'
playAgain = raw_input()
```

Code Explanation – step by step

```python
import random
import time
```

Global Scope
playAgain == 'y'
caveNumber == '2'

```python
print 'You are in a land full of dragons. In front of you,'
print 'you see two caves. In one cave, the dragon is friendly'
print 'and will share his treasure with you. The other dragon'
print 'is greedy and hungry, and will eat you on sight.'
print

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave
```

Code Explanation – step by step

```python
import random
import time

def displayIntro():

    print 'you see two caves. In one cave, the dragon is friendly'
    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave
```

Global Scope
playAgain == 'y'
caveNumber == '2'

```
import random
import time

def displayIntro():
    print 'You are in a land full of dragons. In front of you,'

    print 'and will share his treasure with you. The other dragon'
    print 'is greedy and hungry, and will eat you on sight.'
    print

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave
```

Global Scope
playAgain == 'y'
caveNumber == '2'

Code Explanation – step by step

```python
import random
import time

def displayIntro():
    print 'You are in a land full of dragons. In front of you,'
    print 'you see two caves. In one cave, the dragon is friendly'

    print 'is greedy and hungry, and will eat you on sight.'
    print

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave
```

Global Scope
playAgain == 'y'
caveNumber == '2'

```
import random
import time

def displayIntro():
    print 'You are in a land full of dragons. In front of you,'
    print 'you see two caves. In one cave, the dragon is friendly'
    print 'and will share his treasure with you. The other dragon'
```

```
    print

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave
```

Global Scope
playAgain == 'y'
caveNumber == '2'

Code Explanation – step by step

```
   print 'is greedy and hungry, and will eat you on sight.'

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)
```

Global Scope
`playAgain == 'y'`
`caveNumber == '2'`

Code Explanation – step by step

```python
    print 'is greedy and hungry, and will eat you on sight.'
    print

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()



    checkCave(caveNumber)
```

Global Scope
`playAgain == 'y'`
`caveNumber == '2'`

Code Explanation – step by step

```python
        cave = ''
        while cave != '1' and cave != '2':
            print 'Which cave will you go into? (1 or 2)'
            cave = raw_input()

        return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'
```

Global Scope
playAgain == 'y'
caveNumber == '2'

Code Explanation – step by step

```python
def chooseCave():

    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!!'
    else:
        print 'Gobbles you down in one bite!!'
```

Global Scope
playAgain == 'y'
caveNumber == '2'

Code Explanation – step by step

```python
def chooseCave():
    cave = ''

        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!!'
    else:
        print 'Gobbles you down in one bite!!'
```

Global Scope
playAgain == 'y'
caveNumber == '2'

Lobal Scope
cave == ''

Code Explanation – step by step

```python
def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':

        cave = raw_input()

    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'
```

Global Scope
playAgain == 'y'
caveNumber == '2'

Lobal Scope
cave == ''

Code Explanation – step by step

```python
def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print 'Which cave will you go into? (1 or 2)'

    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!!'
    else:
        print 'Gobbles you down in one bite!!'
```

Global Scope

```
playAgain == 'y'
caveNumber == '2'
```

Lobal Scope

```
cave == ''
```

Code Explanation – step by step

```python
def chooseCave():
    cave = ''

        print 'Which cave will you go into? (1 or 2)'
        cave = raw_input()

    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'
```

Global Scope

```
playAgain == 'y'
caveNumber == '2'
```

Lobal Scope

```
cave == '1'
```

Code Explanation – step by step

```python
def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Global Scope
playAgain == 'y'
caveNumber == '2'

Lobal Scope
cave == '1'

```
    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()



    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Global Scope
playAgain == 'y'
caveNumber == '1'

```python
    return cave
```

Global Scope
`playAgain == 'y'`
`caveNumber == '1'`

```python
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Code Explanation – step by step

```python
    return cave

def checkCave(chosenCave):

    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Global Scope

`playAgain == 'y'`

`caveNumber == '1'`

Lobal Scope

`chosenCave == '1'`

Code Explanation – step by step

```python
        return cave

def checkCave(chosenCave):
    print 'You approach the cave...'

    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
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playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Global Scope
playAgain == 'y'
caveNumber == '1'

Lobal Scope
chosenCave == '1'

Code Explanation – step by step

```python
        return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)

    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Global Scope

`playAgain == 'y'`

`caveNumber == '1'`

Lobal Scope

`chosenCave == '1'`

Code Explanation – step by step

```python
        return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'

    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Global Scope
playAgain == 'y'
caveNumber == '1'

Lobal Scope
chosenCave == '1'

Code Explanation – step by step

```python
    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)

    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Global Scope

```
playAgain == 'y'
```
```
caveNumber == '1'
```

Lobal Scope

```
chosenCave == '1'
```

Code Explanation – step by step

```python
        return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'

    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Global Scope
playAgain == 'y'
caveNumber == '1'

Lobal Scope
chosenCave == '1'

Code Explanation – step by step

```python
    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Global Scope
`playAgain == 'y'`
`caveNumber == '1'`

Lobal Scope
`chosenCave == '1'`

Code Explanation – step by step

```python
        return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Global Scope	
`playAgain == 'y'`	
`caveNumber == '1'`	

Lobal Scope	
`chosenCave == '1'`	

101

Code Explanation – step by step

```python
        return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)
```

Global Scope
playAgain == 'y'
caveNumber == '1'

Lobal Scope
chosenCave == '1'
friendlyCave == 2

```python
        print 'Gives you his treasure!'
    else:
        print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Code Explanation – step by step

```python
    return cave

def checkCave(chosenCave):
    print 'You approach the cave...'
    time.sleep(2)
    print 'It is dark and spooky...'
    time.sleep(2)
    print 'A large dragon jumps out in front of you! He opens his jaws and...'
    print
    time.sleep(2)

    friendlyCave = random.randint(1, 2)

    if chosenCave == str(friendlyCave):
        print 'Gives you his treasure!'
    else:
```

Global Scope
playAgain == 'y'
caveNumber == '1'

Lobal Scope
chosenCave == '1'
friendlyCave == 2

```python
playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Code Explanation – step by step

```python
friendlyCave = random.randint(1, 2)

if chosenCave == str(friendlyCave):
    print 'Gives you his treasure!'
else:
    print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)


    playAgain = raw_input()
```

Global Scope
playAgain == 'y'
caveNumber == '1'

Code Explanation – step by step

```python
friendlyCave = random.randint(1, 2)

if chosenCave == str(friendlyCave):
    print 'Gives you his treasure!'
else:
    print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
```

Global Scope
playAgain == 'n'
caveNumber == '1'

```
friendlyCave = random.randint(1, 2)

if chosenCave == str(friendlyCave):
    print 'Gives you his treasure!'
else:
    print 'Gobbles you down in one bite!'

playAgain = 'yes'
```

Global Scope
playAgain == 'n'
caveNumber == '1'

```
    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

Code Explanation – step by step

```python
friendlyCave = random.randint(1, 2)

if chosenCave == str(friendlyCave):
    print 'Gives you his treasure!'
else:
    print 'Gobbles you down in one bite!'

playAgain = 'yes'
while playAgain == 'yes' or playAgain == 'y':

    displayIntro()

    caveNumber = chooseCave()

    checkCave(caveNumber)

    print 'Do you want to play again? (yes or no)'
    playAgain = raw_input()
```

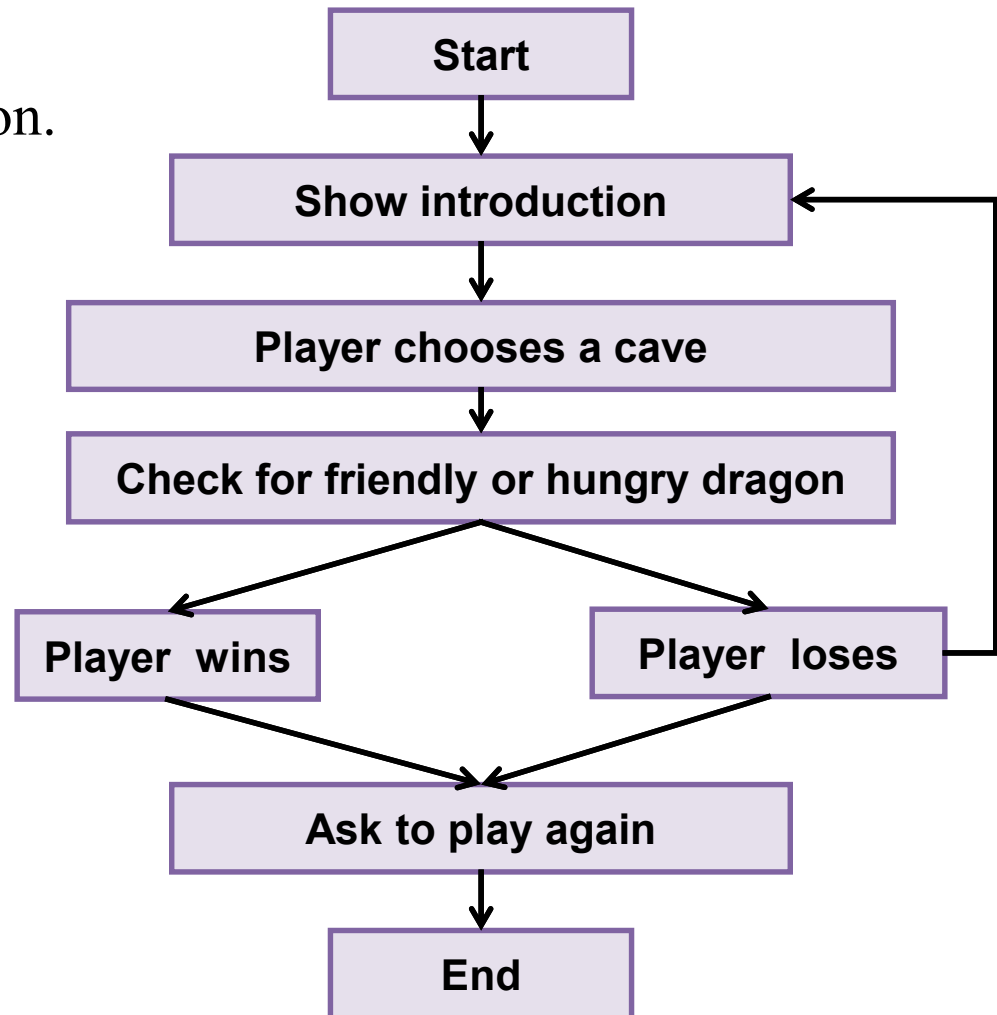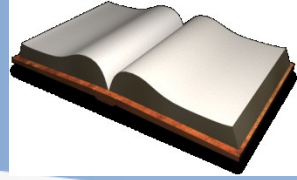| Global Scope |
|---|
| playAgain == 'n' |
| caveNumber == '1' |

Designing the Program

■ **Flow chart**

- shows every possible action.

Things Covered In This Chapter

- The `time` module.

- The `time.sleep()` function.

- The `return` keyword.

- Creating our own functions with the `def` keyword.

- The `and` and `or` and `not` boolean operators.

- Truth tables

- Variable scope (Global and Local)

- Parameters and Arguments

- Flow charts