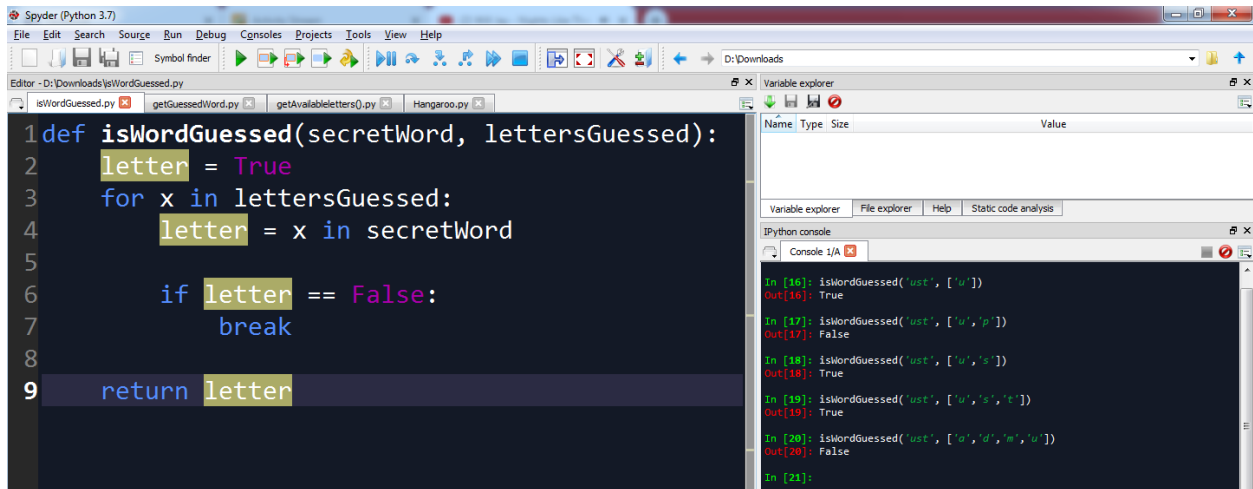


## 1. isWordGuessed Function



```
1 def isWordGuessed(secretWord, lettersGuessed):
2     letter = True
3     for x in lettersGuessed:
4         letter = x in secretWord
5
6         if letter == False:
7             break
8
9     return letter
```

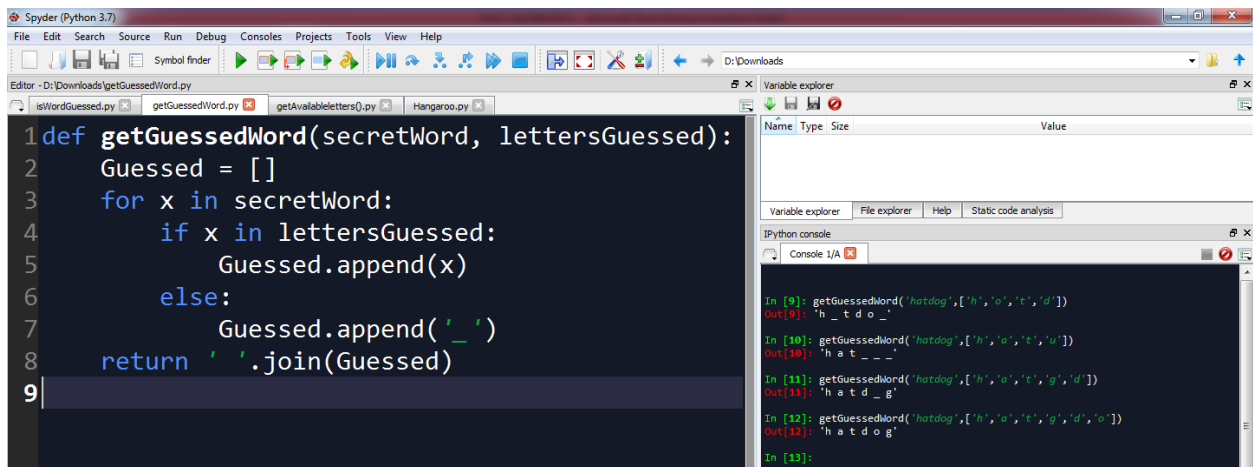
Variable explorer

Name	Type	Size	Value
------	------	------	-------

IPython console

```
In [16]: isWordGuessed('ust', ['u'])
Out[16]: True
In [17]: isWordGuessed('ust', ['u', 'p'])
Out[17]: False
In [18]: isWordGuessed('ust', ['u', 's'])
Out[18]: True
In [19]: isWordGuessed('ust', ['u', 's', 't'])
Out[19]: True
In [20]: isWordGuessed('ust', ['a', 'd', 'm', 'u'])
Out[20]: False
In [21]:
```

## 2. getGuessedWord



```
1 def getGuessedWord(secretWord, lettersGuessed):
2     Guessed = []
3     for x in secretWord:
4         if x in lettersGuessed:
5             Guessed.append(x)
6         else:
7             Guessed.append('_')
8     return ' '.join(Guessed)
9
```

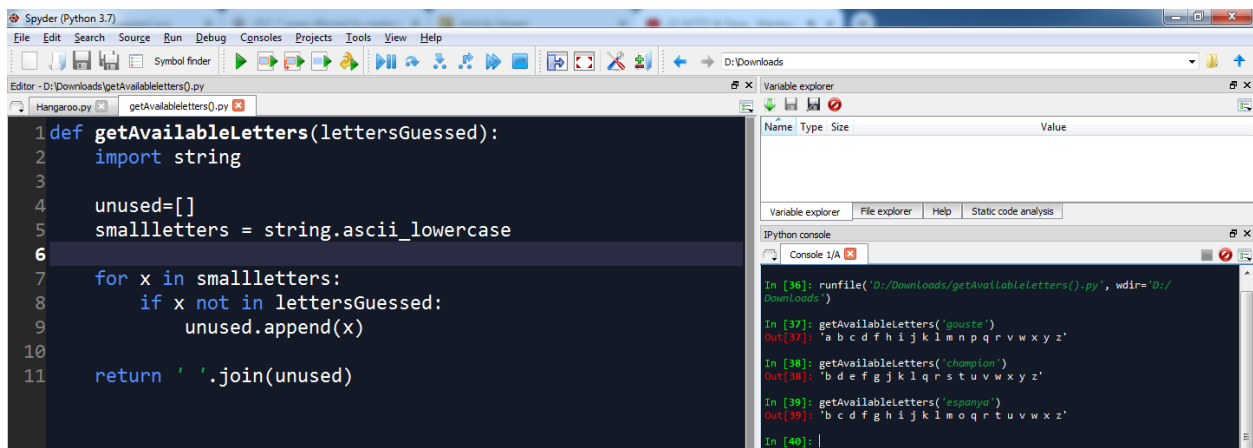
Variable explorer

Name	Type	Size	Value
------	------	------	-------

IPython console

```
In [9]: getGuessedWord('hatdog', ['h', 'a', 't', 'd'])
Out[9]: 'h _ t d o _'
In [10]: getGuessedWord('hatdog', ['h', 'a', 't', 'u'])
Out[10]: 'h a t _ _'
In [11]: getGuessedWord('hatdog', ['h', 'a', 't', 'g', 'd'])
Out[11]: 'h a t d _ g'
In [12]: getGuessedWord('hatdog', ['h', 'a', 't', 'g', 'd', 'o'])
Out[12]: 'h a t d o g'
In [13]:
```

## 3. getAvailableLetters



```
1 def getAvailableLetters(lettersGuessed):
2     import string
3
4     unused=[]
5     smallletters = string.ascii_lowercase
6
7     for x in smallletters:
8         if x not in lettersGuessed:
9             unused.append(x)
10
11    return ' '.join(unused)
```

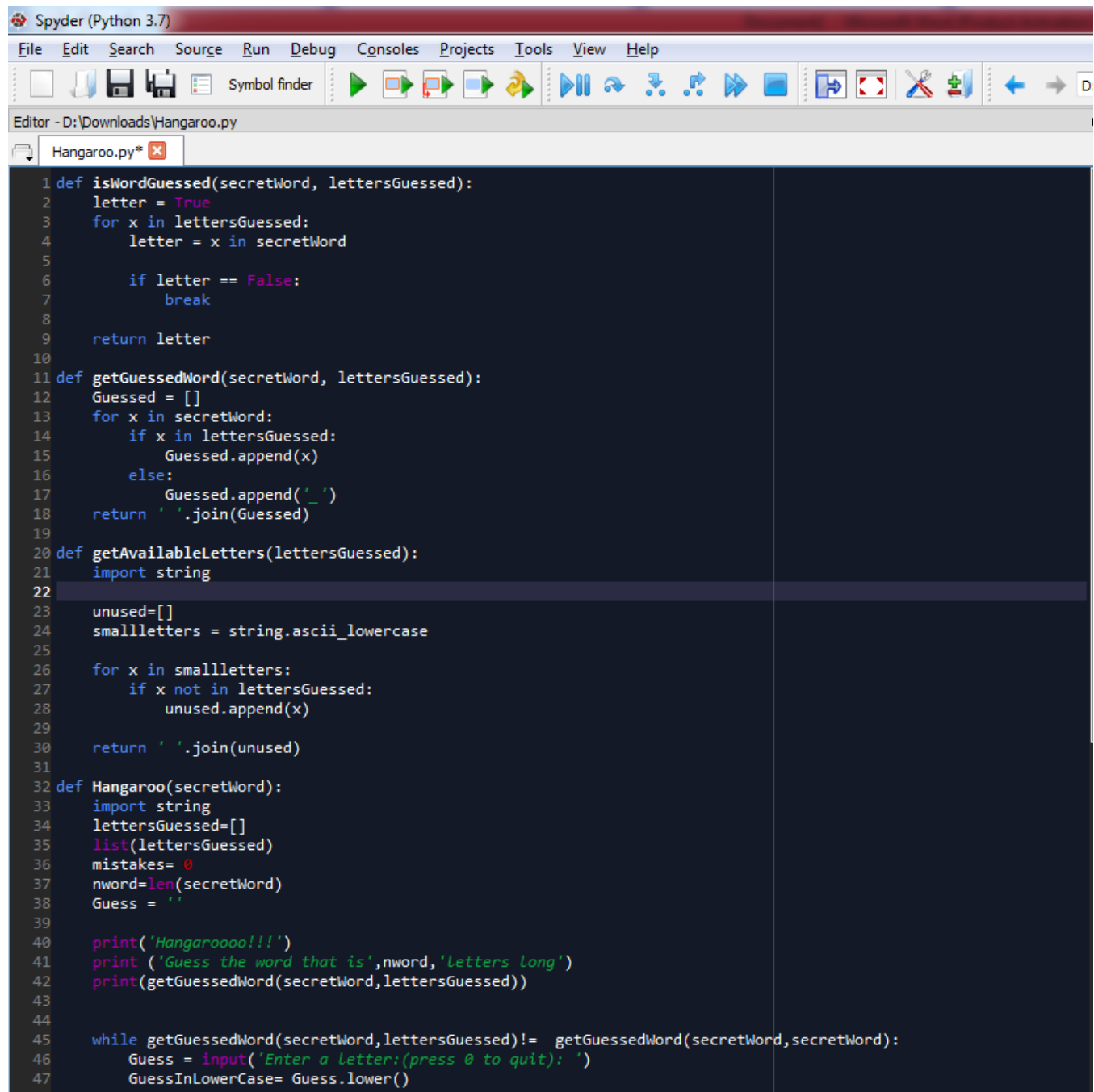
Variable explorer

Name	Type	Size	Value
------	------	------	-------

IPython console

```
In [36]: runfile('D:/Downloads/getAvailableLetters().py', wdir='D:/Downloads')
In [37]: getAvailableLetters('youste')
Out[37]: 'a b c d f h i j k l m n p q r v w x y z'
In [38]: getAvailableLetters('champion')
Out[38]: 'b d e f g j k l q r s t u v w x y z'
In [39]: getAvailableLetters('ssponys')
Out[39]: 'b c d f g h i j k l m o q r t u v w x z'
In [40]:
```

#### 4. Hangaroo Script File

The image shows a screenshot of the Spyder Python IDE interface. The title bar at the top reads "Spyder (Python 3.7)". Below the title bar is a menu bar with options: File, Edit, Search, Source, Run, Debug, Consoles, Projects, Tools, View, and Help. Underneath the menu bar is a toolbar with various icons for file operations and execution. The main editor window displays a Python script named "Hangaroo.py" located at "D:\Downloads\Hangaroo.py". The script contains several functions: 

```
1 def isWordGuessed(secretWord, lettersGuessed):
2     letter = True
3     for x in lettersGuessed:
4         letter = x in secretWord
5
6     if letter == False:
7         break
8
9     return letter
10
11 def getGuessedWord(secretWord, lettersGuessed):
12     Guessed = []
13     for x in secretWord:
14         if x in lettersGuessed:
15             Guessed.append(x)
16         else:
17             Guessed.append('_')
18     return ' '.join(Guessed)
19
20 def getAvailableLetters(lettersGuessed):
21     import string
22
23     unused=[]
24     smallletters = string.ascii_lowercase
25
26     for x in smallletters:
27         if x not in lettersGuessed:
28             unused.append(x)
29
30     return ' '.join(unused)
31
32 def Hangaroo(secretWord):
33     import string
34     lettersGuessed=[]
35     list(lettersGuessed)
36     mistakes= 0
37     nword=len(secretWord)
38     Guess = ''
39
40     print('Hangaroo!!!')
41     print('Guess the word that is',nword,'letters long')
42     print(getGuessedWord(secretWord,lettersGuessed))
43
44
45     while getGuessedWord(secretWord,lettersGuessed)!= getGuessedWord(secretWord,secretWord):
46         Guess = input('Enter a letter:(press 0 to quit): ')
47         GuessInLowerCase= Guess.lower()
```

```
Spyder (Python 3.7)
File Edit Search Source Run Debug Consoles Projects Tools View Help
Symbol finder
Editor - D:\Downloads\Hangaroo.py
Hangaroo.py
30 return ' '.join(unused)
31
32 def Hangaroo(secretWord):
33     import string
34     lettersGuessed=[]
35     list(lettersGuessed)
36     mistakes= 0
37     nword=len(secretWord)
38     Guess = ''
39
40     print('Hangaroo!!!')
41     print ('Guess the word that is',nword,'Letters Long')
42     print(getGuessedWord(secretWord,lettersGuessed))
43
44
45     while getGuessedWord(secretWord,lettersGuessed)!= getGuessedWord(secretWord,secretWord):
46         Guess = input('Enter a Letter:(press 0 to quit): ')
47         GuessInLowerCase= Guess.lower()
48
49         if Guess == '0':break
50         elif len(GuessInLowerCase) != 1 or (GuessInLowerCase in string.ascii_lowercase) == False :
51             print('Invalid input, try again')
52             print ('-----')
53
54         elif (GuessInLowerCase in secretWord) == False and (GuessInLowerCase in lettersGuessed) == False:
55             mistakes += 1
56             print ('Wrong, try again')
57             print('mistakes made: ', mistakes)
58             lettersGuessed.append(GuessInLowerCase)
59
60         elif (GuessInLowerCase in lettersGuessed) == True :
61             print ('You have already guessed that-so try again!')
62
63         else:
64             print('You have made a right guess')
65             lettersGuessed.append(GuessInLowerCase)
66
67             print(getGuessedWord(secretWord,lettersGuessed))
68             print('Letters Available: ', getAvailableletters(lettersGuessed))
69
70     if getGuessedWord(secretWord,lettersGuessed)!= getGuessedWord(secretWord,secretWord) or Guess == '0':
71         print('You did not guess the secret word. The secret word is ',secretWord)
72
73     elif getGuessedWord(secretWord,lettersGuessed)== getGuessedWord(secretWord,secretWord):
74         print('')
75         print('WINNER WINNER HANGAROO DINNER','The secret Word is',secretWord)
76     return
```

## Scenarios

### 1. If you guessed a right letter

The screenshot shows the Spyder Python IDE with the Hangaroo game code. The code is in a file named `Hangaroo.py` located at `D:\Downloads\Hangaroo.py`. The code defines a function `Hangaroo(secretWord)` that takes a secret word and returns a list of guessed letters. The game logic includes a while loop that continues until the user guesses the secret word or runs out of attempts. The code uses `input()` to get user input and `print()` to display the game state. The console output shows the game starting with the secret word 'growingtigers' and the user guessing 'e', which is a correct letter.

```
30 return '.join(unused)
31
32 def Hangaroo(secretWord):
33     import string
34     lettersGuessed=[]
35     list(lettersGuessed)
36     mistakes= 0
37     nword=len(secretWord)
38     Guess = ''
39
40     print('Hangaroo!!!')
41     print('Guess the word that is',nword,'letters long')
42     print(getGuessedWord(secretWord,lettersGuessed))
43
44
45     while getGuessedWord(secretWord,lettersGuessed)!= getGuessedWord(secretWord,secretWord):
46         Guess = input('Enter a letter:(press 0 to quit): ')
47         GuessInLowerCase= Guess.lower()
48
49         if Guess == '0':break
50         elif len(GuessInLowerCase) != 1 or (GuessInLowerCase in string.ascii_lowercase) == False :
51             print('Invalid input, try again')
52             print('-----')
53
54         elif (GuessInLowerCase in secretWord) == False and (GuessInLowerCase in lettersGuessed) == False:
55             mistakes += 1
56             print('Wrong, try again')
57             print('mistakes made: ', mistakes)
58             lettersGuessed.append(GuessInLowerCase)
59
60         elif (GuessInLowerCase in lettersGuessed) == True :
61             print('You have already guessed that-so try again!')
62
63         else:
64             print('You have made a right guess')
65             lettersGuessed.append(GuessInLowerCase)
66
67             print(getGuessedWord(secretWord,lettersGuessed))
68             print('Letters Available: ', getAvailableLetters(lettersGuessed))
69
70     if getGuessedWord(secretWord,lettersGuessed)!= getGuessedWord(secretWord,secretWord) or Guess == '0':
71         print('You did not guess the secret word. The secret word is ',secretWord)
72
73     elif getGuessedWord(secretWord,lettersGuessed)== getGuessedWord(secretWord,secretWord):
74         print('')
75         print('WINNER WINNER HANGAROO DINNER','The secret Word is',secretWord)
76     return
```

Console output:

```
In [29]: Hangaroo('growingtigers')
Hangaroo!!!
Guess the word that is 14 letters long
-----
Enter a letter:(press 0 to quit): e
You have made a right guess
Letters Available:  a b c d f g h i j k l m n o p q r s t u v w x y z
Enter a letter:(press 0 to quit): |
```

### 2. If you entered an invalid input like a number instead of letter

The screenshot shows the Spyder Python IDE with the Hangaroo game code. The code is in a file named `Hangaroo.py` located at `D:\Downloads\Hangaroo.py`. The code defines a function `Hangaroo(secretWord)` that takes a secret word and returns a list of guessed letters. The game logic includes a while loop that continues until the user guesses the secret word or runs out of attempts. The code uses `input()` to get user input and `print()` to display the game state. The console output shows the game starting with the secret word 'growingtigers' and the user guessing '5', which is an invalid input. The code rejects the input and prompts the user to try again.

```
30 return '.join(unused)
31
32 def Hangaroo(secretWord):
33     import string
34     lettersGuessed=[]
35     list(lettersGuessed)
36     mistakes= 0
37     nword=len(secretWord)
38     Guess = ''
39
40     print('Hangaroo!!!')
41     print('Guess the word that is',nword,'letters long')
42     print(getGuessedWord(secretWord,lettersGuessed))
43
44
45     while getGuessedWord(secretWord,lettersGuessed)!= getGuessedWord(secretWord,secretWord):
46         Guess = input('Enter a letter:(press 0 to quit): ')
47         GuessInLowerCase= Guess.lower()
48
49         if Guess == '0':break
50         elif len(GuessInLowerCase) != 1 or (GuessInLowerCase in string.ascii_lowercase) == False :
51             print('Invalid input, try again')
52             print('-----')
53
54         elif (GuessInLowerCase in secretWord) == False and (GuessInLowerCase in lettersGuessed) == False:
55             mistakes += 1
56             print('Wrong, try again')
57             print('mistakes made: ', mistakes)
58             lettersGuessed.append(GuessInLowerCase)
59
60         elif (GuessInLowerCase in lettersGuessed) == True :
61             print('You have already guessed that-so try again!')
62
63         else:
64             print('You have made a right guess')
65             lettersGuessed.append(GuessInLowerCase)
66
67             print(getGuessedWord(secretWord,lettersGuessed))
68             print('Letters Available: ', getAvailableLetters(lettersGuessed))
69
70     if getGuessedWord(secretWord,lettersGuessed)!= getGuessedWord(secretWord,secretWord) or Guess == '0':
71         print('You did not guess the secret word. The secret word is ',secretWord)
72
73     elif getGuessedWord(secretWord,lettersGuessed)== getGuessedWord(secretWord,secretWord):
74         print('')
75         print('WINNER WINNER HANGAROO DINNER','The secret Word is',secretWord)
76     return
```

Console output:

```
In [29]: Hangaroo('growingtigers')
Hangaroo!!!
Guess the word that is 14 letters long
-----
Enter a letter:(press 0 to quit): e
You have made a right guess
Letters Available:  a b c d f g h i j k l m n o p q r s t u v w x y z
Enter a letter:(press 0 to quit): 5
Invalid input, try again
-----
Letters Available:  a b c d f g h i j k l m n o p q r s t u v w x y z
Enter a letter:(press 0 to quit):
```

### 3. If you guessed a wrong letter

The screenshot shows the Spyder Python IDE with the Hangaroo game code in the editor. The code defines a function `Hangaroo(secretWord)` that manages a list of guessed letters and a counter for mistakes. It uses a `while` loop to repeatedly prompt the user for a letter until the word is guessed correctly or 14 mistakes are made. The console output shows the game's progress: the secret word is 14 letters long, and the user has guessed 'e' correctly. When the user enters '5', the program responds with "Invalid input, try again" and shows the available letters: "a b c d f g h i j k l m n o p q r s t u v w x y z".

```
30 return ''.join(used)
31
32 def Hangaroo(secretWord):
33     import string
34     lettersGuessed=[]
35     list(lettersGuessed)
36     mistakes=0
37     nword=len(secretWord)
38     Guess = ''
39
40     print("Hangaroo!!!")
41     print("Guess the word that is",nword,"letters long")
42     print(getGuessedWord(secretWord,lettersGuessed))
43
44
45     while getGuessedWord(secretWord,lettersGuessed)!= getGuessedWord(secretWord,secretWord):
46         Guess = input("Enter a letter:(press 0 to quit): ")
47         GuessInLowerCase= Guess.lower()
48
49         if Guess == '0':break
50         elif len(GuessInLowerCase) != 1 or (GuessInLowerCase in string.ascii_lowercase) == False :
51             print("Invalid input, try again")
52             print("-----")
53
54         elif (GuessInLowerCase in secretWord) == False and (GuessInLowerCase in lettersGuessed) == False:
55             mistakes += 1
56             print("Wrong, try again")
57             print("mistakes made: ", mistakes)
58             lettersGuessed.append(GuessInLowerCase)
59
60         elif (GuessInLowerCase in lettersGuessed) == True :
61             print("You have already guessed that-so try again!")
62
63         else:
64             print("You have made a right guess")
65             lettersGuessed.append(GuessInLowerCase)
66
67             print(getGuessedWord(secretWord,lettersGuessed))
68             print("Letters Available: ", getAvailableLetters(lettersGuessed))
69
70     if getGuessedWord(secretWord,lettersGuessed)!= getGuessedWord(secretWord,secretWord) or Guess == '0':
71         print("You did not guess the secret word. The secret word is ",secretWord)
72
73     elif getGuessedWord(secretWord,lettersGuessed)== getGuessedWord(secretWord,secretWord):
74         print("")
75         print("WINNER WINNER HANGAROO DINNER", "The secret Word is",secretWord)
76     return
```

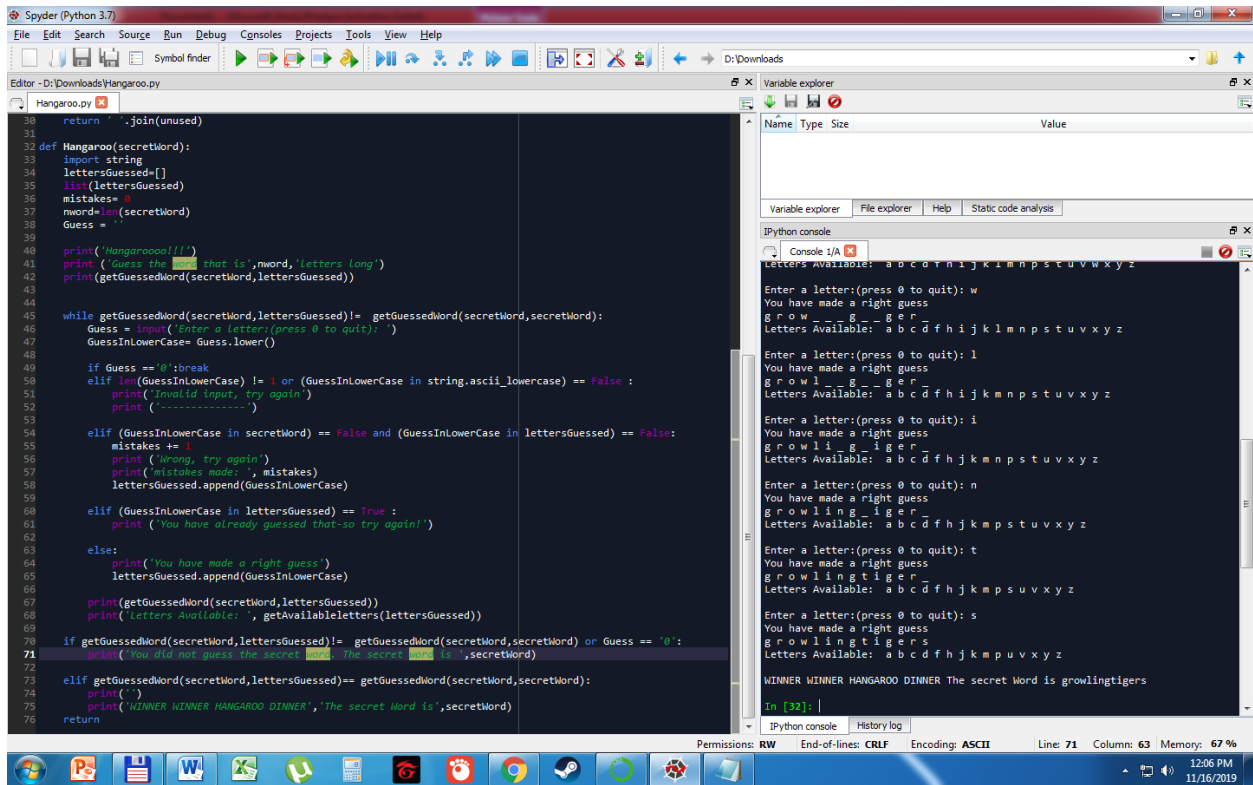
Console output:

```
In [31]: Hangaroo('growlingtigers')
Hangaroo!!!
Guess the word that is 14 letters long
-----
Enter a letter:(press 0 to quit): e
You have made a right guess
Letters Available:  a b c d f g h i j k l m n o p q r s t u v w x y z
Enter a letter:(press 0 to quit): 5
Invalid input, try again
-----
Letters Available:  a b c d f g h i j k l m n o p q r s t u v w x y z
Enter a letter:(press 0 to quit): q
Wrong, try again
mistakes made:  1
Letters Available:  a b c d f g h i j k l m n o p r s t u v w x y z
Enter a letter:(press 0 to quit): |
```

### 4. If you have already guessed the same letter

This screenshot is identical to the previous one, showing the same code and console output. The console output shows the user entering 'e' correctly, then '5' as invalid input, and then 'q' as a wrong guess. The next prompt is "Enter a letter:(press 0 to quit): e", which would trigger the "You have already guessed that-so try again!" message according to the code logic.

## 5. If you won the game



```
30 return ' '.join(used)
31
32 def Hangaroo(secretWord):
33     import string
34     lettersGuessed=[]
35     list(lettersGuessed)
36     mistakes=0
37     nword=len(secretWord)
38     Guess = ''
39
40     print('Hangaroo!!!')
41     print('Guess the word that is',nword,'letters long')
42     print(getGussedWord(secretWord,lettersGuessed))
43
44     while getGussedWord(secretWord,lettersGuessed)!= getGussedWord(secretWord,secretWord):
45         Guess = input('Enter a letter:(press 0 to quit): ')
46         GuessInLowerCase= Guess.lower()
47
48         if Guess == '0':break
49         elif len(GuessInLowerCase) != 1 or (GuessInLowerCase in string.ascii_lowercase) == False:
50             print('Invalid input, try again')
51             print('-----')
52
53         elif (GuessInLowerCase in secretWord) == False and (GuessInLowerCase in lettersGuessed) == False:
54             mistakes += 1
55             print('Wrong, try again')
56             print('mistakes made: ', mistakes)
57             lettersGuessed.append(GuessInLowerCase)
58
59         elif (GuessInLowerCase in lettersGuessed) == True:
60             print('You have already guessed that-so try again!')
61
62         else:
63             print('You have made a right guess')
64             lettersGuessed.append(GuessInLowerCase)
65
66         print(getGussedWord(secretWord,lettersGuessed))
67         print('Letters Available: ', getAvailableLetters(lettersGuessed))
68
69     if getGussedWord(secretWord,lettersGuessed)!= getGussedWord(secretWord,secretWord) or Guess == '0':
70         print('You did not guess the secret word. The secret word is ',secretWord)
71
72     elif getGussedWord(secretWord,lettersGuessed)== getGussedWord(secretWord,secretWord):
73         print('')
74         print('WINNER WINNER HANGAROO DINNER', 'The secret Word is',secretWord)
75     return
```

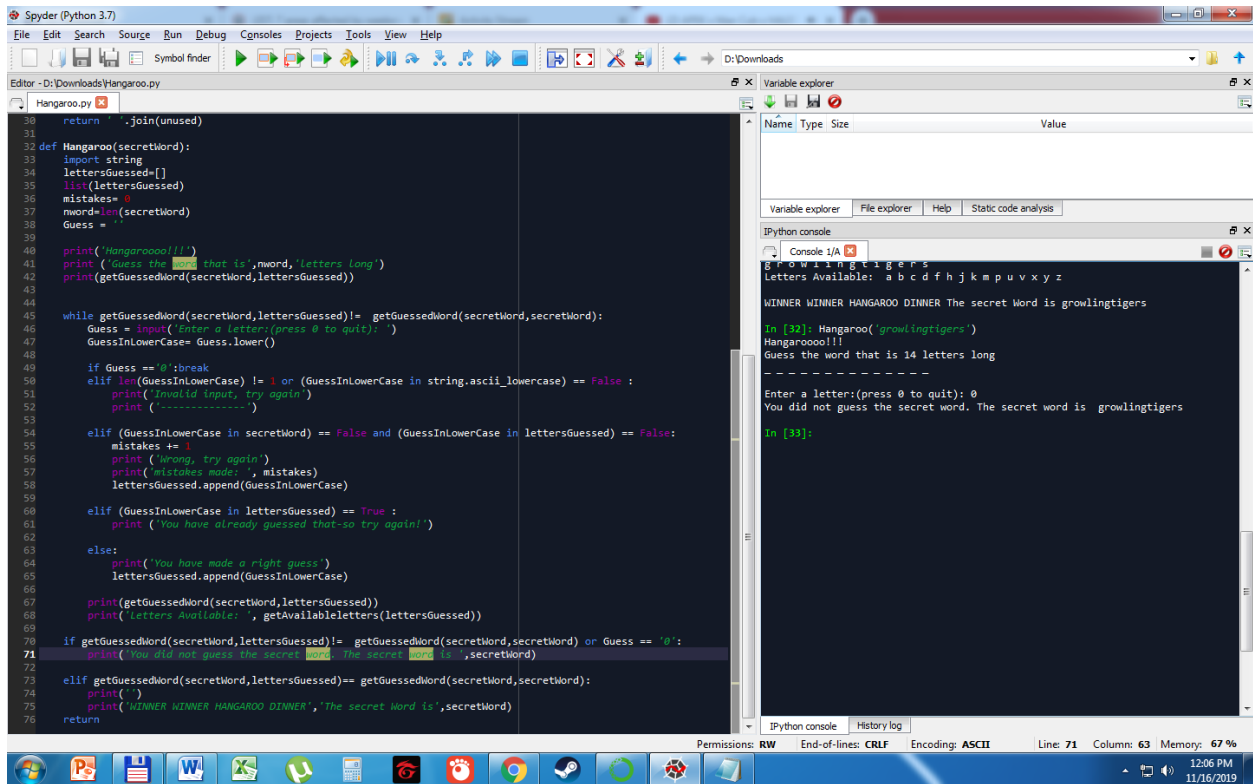
Variable explorer

Name	Type	Size	Value
------	------	------	-------

IPython console

```
Console 1/A
Letters Available: a b c d f h j k l m n p s t u v x y z
Enter a letter:(press 0 to quit): w
You have made a right guess
g r o w _ _ _ g _ _ g e r _
Letters Available: a b c d f h j k l m n p s t u v x y z
Enter a letter:(press 0 to quit): l
You have made a right guess
g r o w l _ _ g _ _ g e r _
Letters Available: a b c d f h j k l m n p s t u v x y z
Enter a letter:(press 0 to quit): i
You have made a right guess
g r o w l i _ g _ _ i g e r _
Letters Available: a b c d f h j k m n p s t u v x y z
Enter a letter:(press 0 to quit): n
You have made a right guess
g r o w l i n g _ i g e r _
Letters Available: a b c d f h j k m p s t u v x y z
Enter a letter:(press 0 to quit): t
You have made a right guess
g r o w l i n g t i g e r _
Letters Available: a b c d f h j k m p s u v x y z
Enter a letter:(press 0 to quit): s
You have made a right guess
g r o w l i n g t i g e r s
Letters Available: a b c d f h j k m p u v x y z
WINNER WINNER HANGAROO DINNER The secret word is growlingtigers
In [32]:
```

## 6. If you want to quit the game or end the loop.



```
30 return ' '.join(used)
31
32 def Hangaroo(secretWord):
33     import string
34     lettersGuessed=[]
35     list(lettersGuessed)
36     mistakes=0
37     nword=len(secretWord)
38     Guess = ''
39
40     print('Hangaroo!!!')
41     print('Guess the word that is',nword,'letters long')
42     print(getGussedWord(secretWord,lettersGuessed))
43
44     while getGussedWord(secretWord,lettersGuessed)!= getGussedWord(secretWord,secretWord):
45         Guess = input('Enter a letter:(press 0 to quit): ')
46         GuessInLowerCase= Guess.lower()
47
48         if Guess == '0':break
49         elif len(GuessInLowerCase) != 1 or (GuessInLowerCase in string.ascii_lowercase) == False:
50             print('Invalid input, try again')
51             print('-----')
52
53         elif (GuessInLowerCase in secretWord) == False and (GuessInLowerCase in lettersGuessed) == False:
54             mistakes += 1
55             print('Wrong, try again')
56             print('mistakes made: ', mistakes)
57             lettersGuessed.append(GuessInLowerCase)
58
59         elif (GuessInLowerCase in lettersGuessed) == True:
60             print('You have already guessed that-so try again!')
61
62         else:
63             print('You have made a right guess')
64             lettersGuessed.append(GuessInLowerCase)
65
66         print(getGussedWord(secretWord,lettersGuessed))
67         print('Letters Available: ', getAvailableLetters(lettersGuessed))
68
69     if getGussedWord(secretWord,lettersGuessed)!= getGussedWord(secretWord,secretWord) or Guess == '0':
70         print('You did not guess the secret word. The secret word is ',secretWord)
71
72     elif getGussedWord(secretWord,lettersGuessed)== getGussedWord(secretWord,secretWord):
73         print('')
74         print('WINNER WINNER HANGAROO DINNER', 'The secret Word is',secretWord)
75     return
```

Variable explorer

Name	Type	Size	Value
------	------	------	-------

IPython console

```
Console 1/A
g r o w l i n g t i g e r s
Letters Available: a b c d f h j k m p u v x y z
WINNER WINNER HANGAROO DINNER The secret word is growlingtigers
In [32]: Hangaroo('growlingtigers')
Hangaroo!!!
Guess the word that is 14 letters long
-----
Enter a letter:(press 0 to quit): 0
You did not guess the secret word. The secret word is growlingtigers
In [33]:
```