

6.1: A STRING IS A SEQUENCE



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A string is a *sequence* of characters. You can access the characters one at a time with the bracket operator:

```
>>> fruit = 'banana'
>>> letter = fruit[1]
```

The second statement extracts the character at index position 1 from the `fruit` variable and assigns it to the `letter` variable.

The expression in brackets is called an *index*. The index indicates which character in the sequence you want (hence the name).

But you might not get what you expect:

```
>>> print(letter)
a
```

For most people, the first letter of "banana" is `b`, not `a`. But in Python, the index is an offset from the beginning of the string, and the offset of the first letter is zero.

```
>>> letter = fruit[0]
>>> print(letter)
b
```

So `b` is the 0th letter ("zero-eth") of "banana", `a` is the 1th letter ("one-eth"), and `n` is the 2th ("two-eth") letter.

b	a	n	a	n	a
[0]	[1]	[2]	[3]	[4]	[5]

String Indexes

You can use any expression, including variables and operators, as an index, but the value of the index has to be an integer. Otherwise you get:

```
>>> letter = fruit[1.5]
TypeError: string indices must be integers
```