

String Formatting

Recall that when you print multiple items in one print statement, Python automatically separates them with spaces:

```
print("hello", "world") → prints hello world.
```

If you do not want that space in between, you can use a statement like this:

```
print("hello", "world", sep="") → prints helloworld.
```

You can use this syntax to separate the items you are printing by any string you'd like:

```
print("hello", "i", "am", "fine", sep="*ABC*")  
→ prints hello*ABC*i*ABC*am*ABC*fine.
```

You can also use the `sep=""` syntax whenever you need *some* items in a print statement to be surrounded by spaces and some of them not to be: just add in the space separation strings manually where you need them:

```
item = input("What did you buy at the store? ")  
dollars = int(input("How many dollars did it cost? "))  
print("You bought a ", item, " for $", dollars, "!", sep="")
```

Same input and output for this example:

```
What did you buy at the store? book  
How many dollars did it cost? 5  
You bought a book for $5!
```

Note where extra spaces are added into the strings in the print statement, and where they are omitted. For instance, there is a space after the "a" in "You bought a " so the name of the item has a space before it. However, there is no space after the dollar sign or before the exclamation point because we do not want spaces surrounding the price of the item.

There is a similar idea you can use to control whether or not Python starts a new line of output after a print statement. Normally, Python does this, with the effect being two separate print statements always appear on separate lines:

```
print("hello")  
print("world") → prints: hello  
world
```

If you do not want Python to move to a new line of output after a print statement, add `end=""` to the end of the first print statement. This ensures the second line of output will appear on the same line as the first:

```
print("hello", end="")  
print("world") → prints: helloworld
```

Notice the output is now all on one line, but there's no space between the words! You can use `end=" "` if you want a space there.