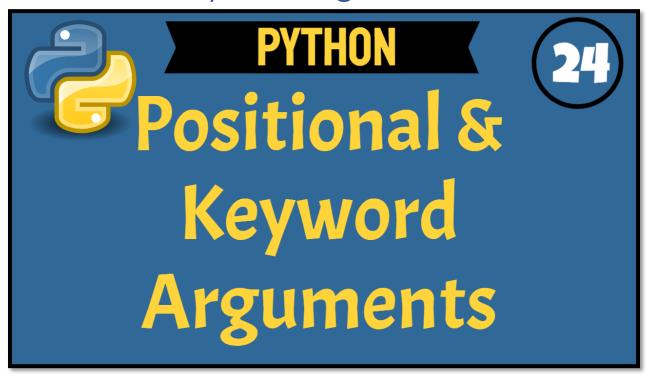# Python Positional & Keyword Arguments

Python Video = https://youtu.be/ggEB8hZBQ9o

Positional Arguments & Keyword Arguments

In this session, we are going to look at 2 Python concepts: Positional Arguments and Keyword Arguments. A Positional Argument depends on the parameter order. Each argument must be in the same position as the parameter. The Keyword Argument happens when we pass a name and a value pair to a function.

Starting with the Positional Arguments, let's remove these default values (John and 38) then add back 1 argument. The name argument will be 'Jane'.

```python
def greet_the_user(name, age):
```

```python
greet_the_user('Jane')
```

From the last session with Default Values, we know this is a problem because there's an age parameter but no age argument. If we do not want to include an age argument then we must include a default value. Let's run and the console shows missing 1 required positional argument: age

```
TypeError: greet_the_user() missing 1 required positional argument: 'age'
```

Another problem is how we sort our arguments. In order, the parameters are name then age so our arguments should also have name before age. But if I write 18 before Jane then the console will swap the values when I run. We see Hello 18 and Are you Jane.

```
Start At The Top!!!
        Hello 18, how are you?
        Are you Jane years old
        This Is A Python Function Tutorial
Stop At The Bottom!!!
```

That's not right. So for Positional Arguments, our program expects the arguments to be in the same position as the parameters. However, the position does not matter if we use Keyword Arguments because a Keyword Argument is based on the key and value. The key is the name of the parameter. age = is the parameter so that will be our key. name = is also the parameter so it will be our key. The values are 18 and Jane. Now, when I run this time, the console shows "Hello Jane" and "Are you 18".

```
greet_the_user(age='18',name='Jane')
```

```
Start At The Top!!!
        Hello Jane, how are you?
        Are you 18 years old
        This Is A Python Function Tutorial
Stop At The Bottom!!!
```

Make sure the key is spelled just like the parameter. If I misspell name by removing 'e' as the argument, we see it's a problem. Hover and the note says "Unexpected argument". It does not recognize nam.

```
greet_the_user(age='18',nam='Jane')
print('Stop At The Bottom!!!')        Unexpected argument
```

Let me show you 1 more thing. We would not on purpose, misspell name and have the arguments out order. So, I will add 'e' to name and place it before age. The Positional Argument cannot come after a Keyword Argument. Watch what happens when '18' is by itself as a positional argument after removing age=. The error says "Positional argument after keyword argument".

```
greet_the_user(name='Jane', '18')
print('Stop At The Bottom!!!')    Positional argument after keyword argument
```

On the other hand, it's not a problem if the 2nd argument is a Keyword Argument and the 1st argument is a Positional Argument. Just remove name= then add back age='18'.

```
greet_the_user('Jane', age='18')
```

There is not a problem when the keyword value is the 2nd argument. Now, when I run, the console shows each value in the correct place "Jane and 18".

Contact Info

✔ Email Rex.Jones@Test4Success.org

✔ YouTube https://www.youtube.com/c/RexJonesII/videos

✔ Facebook https://facebook.com/JonesRexII

✔ Twitter https://twitter.com/RexJonesII

✔ GitHub https://github.com/RexJonesII/Free-Videos

✔ LinkedIn https://www.linkedin.com/in/rexjones34/