

# An Introduction to STEM Programming with Python 3 – Chapter 8 Optional Arguments to a Definition

By

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## In this video we will cover:

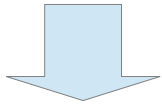
- ✓ Adding default values to arguments of a definition
- ✓ Calling a def with arguments missing from end
- ✓ Passing Keyed arguments

# Def with Default (optional) Parameter

- May define defaults for parameters
- If not passed a value in the call, the variable in the "def" will be assigned the default value.
- Usually the last parameters have default values  
The first ones are required.

# Default Parameter

```
1 def discount(price, percent=.05):  
2     return round(price * (1-percent),2)  
3  
4 print("100 at a default discount is",  
5     discount(100))  
6  
7 print("100 at a 25% discount is",  
8     discount(100, .25))
```



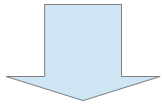
```
100 at a default discount is 95.0  
100 at a 25% discount is 75.0
```

# Named Parameter

- You may optionally put the name of the variable in the def, where you call it
- This allows us to skip arguments in the middle or
- Define them in any order
- There is a lot we can do with this but I wanted you to see it
- RTM – Read The Manual

# Named Parameters

```
1 def discount(price, percent=.05):  
2     return round(price * (1-percent),2)  
3  
4 print("100 at a default discount is",  
5     discount(price = 100))  
6 print("100 at a 25% discount is",  
7     discount(percent=.25, price=100))
```



```
100 at a default discount is 95.0  
100 at a 25% discount is 75.0
```

# Thank you

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