Variables

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Why use variables?

- Abstracts away gory details
  
  \[
  \text{temperature} = \frac{9.0}{5.0} \times \text{celsius} + \text{freezeTemp}
  \]

- Allows you to set it once, use many times
  
  \[
  x = 3465346.22435 \\
  y = x / 6 \\
  z = x \times x + y
  \]

- Allows you to name particular values so you know what they mean
Four ways to create **Variables**

- Assignment
  
  \[ x = \text{“Hello”} \]

- Define a function name
  
  ```python
  def sayName():
      speak(“Hello”)
  ```

- Define a function, inside parentheses
  
  ```python
  def doSomething(thing1, thing2):
      speak(thing1)
      beep(1, thing2)
  ```

- Use a for-loop

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**Assignment**

\[ x = \text{“Hello”} \]

**Define a function name**

```python
def sayName():
    speak(“Hello”)
```

**Define a function, inside parentheses**

```python
def doSomething(thing1, thing2):
    speak(thing1)
    beep(1, thing2)
```
Variables inside the Parens

Define a function, inside parentheses:

```python
def doSomething(thing1, thing2):
    speak(thing1)
    beep(1, thing2)
```

Call it:

```python
doSomething(“I'm sorry, Dave, I can't do that.”, 400)
```
Variables inside the Pparens

Define a function, inside parentheses:

```python
def doSomething(thing1, thing2):
    speak(thing1)
    beep(1, thing2)
```

Call it:
```
doSOMething("I'm sorry, Dave, I can't do that.", 400)
```