

UCSF Intro To Programming

(AKA: Introduction to Computing for Biophysicists / Programming Fundamentals)

Review:

```
print( )
```

Review:

```
# Python handles arithmetic operations:  
print(2 + 2)    # addition  
print(10 - 5)   # subtraction  
print(4 * 3)    # multiplication  
print(8 / 2)    # division  
print(2 ** 3)   # exponentiation (2 raised to the power of 3)
```

Review:

#

#

— 312 —

— 322 —

Review:

```
num = 10  
print("The value of num is:", num)
```

Review:

```
num = 10  
print("The value of num is:", num)
```

```
num = num * 2  
print("Now num is:", num)
```

Review:

```
greeting = "Hello"  
name = "Alice"  
full_greeting = greeting + ", " + name + "!"  
print(full_greeting)
```

Review:

```
text = "Python"  
print(text[0])    # First character  
print(text[-1])   # Last character  
print(text[:3])   # First 3 characters
```


Review:

```
print(text.upper()) # Convert to uppercase  
print(text.lower()) # Convert to lowercase  
print(text.replace("Python", "Coding")) # Replace part of the string
```

Review:

```
name = 'Zack'  
age = 21  
formatted_string = name + ' is ' + str(age)  
print(formatted_string) # Output: Zack is 21
```

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****23

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<i>function call</i>	<i>description</i>
<code>str(x)</code>	<i>conversion of object x to a string</i>
<code>int(x)</code>	<i>conversion of string x to an integer or conversion of float x to an integer by truncation towards zero</i>
<code>float(x)</code>	<i>conversion of string or integer x to a float</i>

****23

Review:

```
name = 'Zack'  
age = 21  
formatted_string = f"{name} is {age} years old."  
print(formatted_string)
```

****23

Review:

```
fruits = ["apple", "banana", "cherry"]
```

Review:

```
fruits = ["apple", "banana", "cherry"]  
fruits.append("orange")
```

Review:

```
fruits = ["apple", "banana", "cherry"]  
fruits.append("orange")  
del fruits[0]
```


Review:

```
fruits = ["apple", "banana", "cherry"]  
  
for fruit in fruits:  
    print(fruit)
```

Review:

```
fruits = ["apple", "banana", "cherry"]  
  
for fruit in fruits:  
    print(fruit)  
  
# Output:  
'''  
apple  
banana  
cherry  
'''
```

Review:

```
x = 10  
y = 20  
print(x == y)  # False  
print(x != y)  # True
```

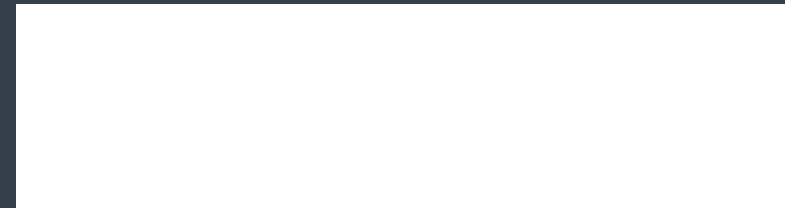
Review:

```
x = 10
y = 20
print(x == y)  # False
print(x != y)  # True
```

Expression	Function
<	Less than
<=	Less than or equal to
>	Greater than
>=	Greater than or equal to
!=	Not equal to
==	Equal to

Review:

```
counter = 0  
while counter < 5:
```



Review:

```
counter = 0
while counter < 5:
    print(counter)
    counter += 1
```

Review:

```
counter = 0
while counter < 5:
    print(counter)
    counter += 1
```

Output:
...

0

1

2

3

4

...

Review:

```
temperature = 25  
if temperature > 30:  
    print("It's hot today.")
```


Review:

```
temperature = 25
if temperature > 30:
    print("It's hot today.")
elif temperature < 15:
    print("It's cold today.")
```

Review:

```
with open('example.txt', 'r') as file:
```



Review:

```
with open('example.txt', 'r') as file:  
    content = file.read()  
    print(content)
```

Review:

```
with open('example.txt', 'r') as file:  
    content = file.read()  
    print(content)  
  
with open('output.txt', 'w') as file:  
    file.write("This is a new file created by Python!")
```

Review:

```
with open('example.txt', 'r') as file:  
    content = file.read()  
    print(content)  
  
with open('output.txt', 'w') as file:  
    file.write("This is a new file created by Python!")
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