

New York University  
School of Continuing and Professional Studies  
Division of Programs in Information Technology

Introduction to Python  
Exercise Solutions, Session 2

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Ex. 2.1 Write a program that takes user input and prints whatever the user typed.

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Suggested Solution:

```
user_input = input('please enter some text: ')
print('you just wrote: {}'.format(user_input))
```

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Ex. 2.2 Again using input(), request the user to enter a number and test to see whether it is all digits (hint: use the str.isdigit() method in an if test). Simply print a success message if all digits, a failure message if no.

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Suggested Solution:

```
user_input = input('please enter an integer: ')

if user_input.isdigit():
    print('THANKS FOR THE INTEGER!')

else:
    print('that was NOT an integer!')
```

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Ex. 2.3 Based on the above program, place your whole program inside a while True: block. If the input is all digits (i.e., an integer), include the print statement indicating success, and then use break to leave the loop, otherwise at the end of the block Python will return to the top of the block automatically and take input() again.

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Suggested Solution:

```
while True:

    user_input = input('please enter an integer: ')

    if user_input.isdigit():
        print('THANKS FOR THE INTEGER!')
        break
    else:
        print('that was NOT an integer!')
```

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Ex. 2.4 Use a while loop to count from 1 to 10. Use an integer counter which you "increment" upon each iteration of the loop. Print each new value of the integer.

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**Suggested Solution:**

```
count = 1
while count <= 10:
    print(count)
    count = count + 1
```

Ex. 2.5 Similar to the above program, use a while loop and a counter to print "Happy birthday to you!" 10 times (do not print the integer count in this version).

**Suggested Solution:**

```
count = 1
while count <= 10:
    print('Happy birthday to you!')
    count = count + 1
```

Ex. 2.6 Modify the above program to take user input with input() and print the message that many times.

**Suggested Solution:**

```
user_input = input('how many times should I greet you? ')

count = 1
while count <= int(user_input):
    print('Happy birthday to you!')
    count = count + 1
```

Ex. 2.7 Modify the above program to test the user input to make sure it is a usable integer. (Hint: use str.isdigit()).

**Suggested Solution:**

```
user_input = input('how many times should I greet you? ')

if not user_input.isdigit():
    exit('error: please enter an integer')

user_input = int(user_input)
count = 1
while count <= user_input:
    print('Happy birthday to you!')
    count = count + 1
```

Ex. 2.8 Use the str.count() method to count the number of times 'or' appears in the following text: I am happy or sad or angry or mad or generous or stingy.

**Suggested Solution:**

```
msg = 'I am happy or sad or angry or mad or generous or stingy.'  
  
search_string = 'or'  
  
count = msg.count(search_string)  
  
print(count)
```

Ex. 2.9 Modifying the above program, take user input of a string to count, and then report the number of occurrences in the sentence.

**Suggested Solution:**

```
msg = 'I am happy or sad or angry or mad or generous or stingy.'  
  
search_string = input('please enter a string to search: ')  
  
count = msg.count(search_string)  
  
print(count)
```

Ex. 2.10 Taking a user input substring, replace the substring in the string with 'x's

**Suggested Solution:**

```
msg = 'I am happy or sad or angry or mad or generous or stingy.'  
  
print(msg)  
  
search_string = input('please enter a character to replace: ')  
  
newstring = msg.replace(search_string, 'x')  
  
print(newstring)
```