Exercise 3.1. Move the last line of this program to the top, so the function call appears before the

deﬁnitions. Run the program and see what error message you get.

**name ‘repeat\_lyrics’ is not defined**

Exercise 3.2.

Move the function call back to the bottom and move the deﬁnition of print lyrics

after the deﬁnition of repeat lyrcs. What happens when you run this program?

Everything remains the same – no errors.

Exercise 3.3

Python provides a built-in function called len that returns the length of a string, so the value of len(‘allen’) is 5.

Write a function named right\_justify that takes a string named s as a parameter and prints the string with enough leading spaces so that the last letter of the string is in column 70 of the display.

def right\_justify(s):

print (‘ ‘\*(70-len(s))+s)

right\_justify(‘allen’)

Exercise 3.4

1. Type this example into a script and test it.

def do\_twice(f):

f()

f()

def print\_spam():

print 'spam'

2. Modify do\_twice so that it takes two arguments, a function object and

a value, and calls the function twice, passing the value as an argument.

nope = raw\_input('What word')

def do\_twice(f,nope):

f(nope)

f(nope)

def print\_spam(nope):

print 'nope'

do\_twice(print\_spam, nope)

3. *Write a more general version of print\_spam, called print\_twice, that*

*# takes a string as a parameter and prints it twice.*

string = 'string'

def print\_twice(string):

print string

print string

print\_twice (string)

4. Use the modified version of do\_twice to call print\_twice twice, passing

'spam' as an argument.

def do\_twice(f, word):

f(word)

f(word)

def print\_spam(word):

print word

string = "steven"

def print\_twice(string):

print string

print string

print\_twice(string)

newWord = "Spam"

do\_twice(print\_twice, newWord)

5. Define a new function called do\_four that takes a function object and

a value and calls the function four times, passing the value as a parameter.

There should be only two statements in the body of this function, not four.

def do\_twice(f, arg):

f(arg)

f(arg)

def print\_twice(arg):

print arg

print arg

do\_twice(print\_twice, 'spam')

print ''

def do\_four(f, arg):

do\_twice(f, arg)

do\_twice(f, arg)

do\_four(print\_twice, 'spam')

print ''