1. What will the following code display?

mystring = 'abcdefg'

print(mystring[2:5])

1. What will the following code display?

mystring = 'abcdefg'

print(mystring[3:])

1. What will the following code display?

mystring = 'abcdefg'

print(mystring[:3])

1. What will the following code display?

mystring = 'abcdefg'

print(mystring[:])

1. Write code using the in operator that determines whether 'd' is in mystring.
2. Assume the variable big references a string. Write a statement that converts the string

it references to lowercase and assigns the converted string to the variable little

.

1. Write an if statement that displays “Digit” if the string referenced by the variable

ch contains a numeric digit. Otherwise, it should display “No digit.”

1. What is the output of the following code?

ch = 'a'

ch2 = ch.upper()

print(ch, ch2)

1. Write a loop that asks the user “Do you want to repeat the program or quit?

(R/Q)”. The loop should repeat until the user has entered an R or Q (either

uppercase or lowercase).

1. What will the following code display?

var = '$'

print(var.upper())

1. Write a loop that counts the number of uppercase characters that appear in the string referenced by the variable mystring.
2. Assume the following statement appears in a program:

days = 'Monday Tuesday Wednesday'

Write a statement that splits the string, creating the following list:

['Monday', 'Tuesday', 'Wednesday']

1. Assume the following statement appears in a program:

values = 'one$two$three$four'

Write a statement that splits the string, creating the following list:

['one', 'two', 'three', 'four']

**Multiple Choice**

1. This is the first index in a string.

a. -1

b. 1

c. 0

d. The size of the string minus one

2. This is the last index in a string.

a. 1

b. 99

c. 0

d. The size of the string minus one

3. The statement print(‘QWERTY’\*2) will print \_\_\_\_\_\_\_\_\_ on the screen.

a. QWERTYQWERTY

b. QWERTY

c. QW

d. ERTY

4. This function returns the length of a string.

a. length

b. size

c. len

d. lengthof

5. This string method returns a copy of the string with all leading whitespace characters

removed.

a. lstrip

b. rstrip

c. remove

d. strip\_leading

6) This string method returns a copy of a string with all the alphabetic letters converted

to uppercase.

a. uppercase()

b. case\_upper()

c. upper()

d. to\_upperCase()

7. This operator determines whether one string is contained inside another string.

a. contains

b. is\_in

c. ==

d. in

8. This string method returns true if a string contains only alphabetic characters and is at

least one character in length.

a. the isalpha method

b. the alpha method

c. the alphabetic method

d. the isletters method

9. This string method returns true if a string contains only numeric digits and is at least

one character in length.

a. the digit method

b. the isdigit method

c. the numeric method

d. the isnumber method

10. This string method returns a copy of the string with all leading and trailing whitespace

characters removed.

a. clean

b. strip c. remove\_whitespace d. rstrip

**Short Answer**

1. What does the following code display?

s="Alice and Bob"

s=s.upper()

s=s[6:]

print(s)

2. What does the following code display?

s="randomness"+"is"+"fun"

print(s[1]+s[10]+s[13])

3. What will the following code display?

mystring = 'abcdefg'

print(mystring[2:5])

4. What will the following code display?

letters = 'ABCDEFGHIJKLMNOPQRSTUVWXYZ'

print(letters[0:10:3])

5. What does the following code display?

name = 'joe'

print(name.lower())

print(name.upper())

print(name)

1. Assume choice references a string. The following if statement determines whether

choice is equal to ‘Y’ or ‘y’:

if choice == 'Y' or choice == 'y':

Rewrite this statement so it only makes one comparison and does not use the or operator.

(*Hint: use either the upper or lower methods.*)

2. Write a loop that counts the number of space characters that appear in the string referenced

by mystring.

3. Write a program to input a string and print the number of lowercase and uppercase

characters in the string.

4. Write a program that asks the user to input five numbers in the form of a string, and

then prints the sum of those numbers.

5. Write a function that accepts a string as an argument and returns true if the argument

ends with the substring '.com'. Otherwise, the function should return false.

6. Write a program to input a string. Print ‘valid’ if it contains the ‘@’ character, else

print ‘invalid’.

7. Write a program to find the location of the first occurrence of a vowel and replace it

with ‘X’. Assume that the string will contain at least one vowel.

8. Assume mystring references a string. Write a statement that uses a slicing expression

and displays the first 3 characters in the string.

9. Write a program that will input a string from the user and remove all consonants from

it. Display the final string and number of characters deleted.

10. Look at the following statement:

mystring = 'cookies>milk>fudge>cake>ice cream'

Write a statement that splits this string, creating the following list:

['cookies', 'milk', 'fudge', 'cake', 'ice cream']

**Programming Exercises**

**1. I nitials**

Write a program that gets a string containing a person’s first, middle, and last names,

and then display their first, middle, and last initials. For example, if the user enters John

William Smith the program should display J. W. S.

**2. Sum of Digits in a String**

Write a program that asks the user to enter a series of single-digit numbers with nothing

separating them. The program should display the sum of all the single digit numbers in the

string. For example, if the user enters 2514, the method should return 12, which is the sum

of 2, 5, 1, and 4.

**3. Date Printer**

Write a program that reads a string from the user containing a date in the form mm/dd/

yyyy. It should print the date in the form March 12, 2014.

**4. Morse Code Converter**

Morse code is a code where each letter of the English alphabet, each digit, and various

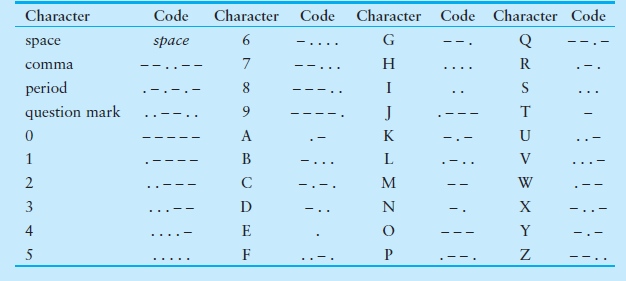
punctuation characters are represented by a series of dots and dashes. Table 8-4 shows

part of the code.

Write a program that asks the user to enter a string, and then converts that string to Morse

code.

Morse Code Table



**5. Alphabetic Telephone Number Translator**

Many companies use telephone numbers like 555-GET-FOOD so the number is easier for

their customers to remember. On a standard telephone, the alphabetic letters are mapped

to numbers in the following fashion:

A, B, and C 5 2

D, E, and F 5 3

G, H, and I 5 4

J, K, and L 5 5

M, N, and O 5 6

P, Q, R, and S 5 7

T, U, and V 5 8

W, X, Y, and Z 5 9

Write a program that asks the user to enter a 10-character telephone number in the format

XXX-XXX-XXXX. The application should display the telephone number with any

alphabetic characters that appeared in the original translated to their numeric equivalent.

For example, if the user enters 555-GET-FOOD the application should display

555-438-3663.

**Sentence Capitalizer**

Write a program with a function that accepts a string as an argument and returns a copy of

the string with the first character of each sentence capitalized. For instance, if the argument

is “hello. my name is Joe. what is your name?” the function should return the string “Hello.

My name is Joe. What is your name?” The program should let the user enter a string and

then pass it to the function. The modified string should be displayed.

**Vowels and Consonants**

Write a program with a function that accepts a string as an argument and returns the

number of vowels that the string contains. The application should have another function

that accepts a string as an argument and returns the number of consonants that the string

contains. The application should let the user enter a string and should display the number

of vowels and the number of consonants it contains.

**10. Most Frequent Character**

Write a program that lets the user enter a string and displays the character that appears

most frequently in the string.

**Word Separator**

Write a program that accepts as input a sentence in which all of the words are run together

but the first character of each word is uppercase. Convert the sentence to a string in which

the words are separated by spaces and only the first word starts with an uppercase letter.

For example the string “StopAndSmellTheRoses.” would be converted to “Stop and smell

the roses.”

**ig Latin**

Write a program that accepts a sentence as input and converts each word to “Pig Latin.” In

one version, to convert a word to Pig Latin you remove the first letter and place that letter

at the end of the word. Then you append the string “ay” to the word. Here is an example:

English: I SLEPT MOST OF THE NIGHT

Pig Latin: IAY LEPTSAY OSTMAY FOAY HETAY IGHTNAY