

# Data Bootcamp: Python Fundamentals 1 Practice

Revised: February 6, 2017

1. Fix this code:

```
bad_string = 'Sarah's code'
```

2. How would you convert the integer  $i = 1234$  to the list

```
l = ['1', '2', '3', '4']
```

3. Suppose **year** is a string containing the year of a particular piece of data; for example,

```
year = '2016'
```

How would we construct a *string* for the following year?

4. Suppose we have two variables,  $x$  and  $y$ . How would you switch their values, so that  $x$  takes on  $y$ 's value and  $y$  takes on  $x$ 's?

5. Set

```
name = 'Jones'
```

Use (a) tab completion to find a method that converts **name** to upper case (capital) letters and (b) the Object inspector to find out how to use that method.

6. Set

```
name = 'Ulysses'
```

Use (a) tab completion to find a method that counts the number of appearances of the letter  $s$  and (b) the Object inspector to find out how to use that method.

7. Set

```
long_string = 'salamandroid'
```

Find a method to replace the  $a$ 's with asterisks.

8. Create the list

```
list = [1, 2, 3, 4, 5]
```

and using list methods

- reverse the elements of  $l$  and print it
  - remove the number 4 from  $l$  and print it
  - append the float 1.5 to  $l$  and print it
  - sort the elements of  $l$  and print it
-

9. You are given the number (as a string) in the following form

```
number = "32,054.23"
```

How would you convert this into a valid float? You should get 32054.23.

10. You are given a name of the form

```
firstname_lastname = 'john_doe'
```

Save Firstname and Lastname variables with capitalized values using string methods.

11. You are given a list of the form:  $l = [0, 1, 2, 4, 5]$ . Use methods for lists to produce a corrected list which contains the number 3 between 2 and 4:

```
l = [0, 1, 2, 3, 4, 5]
```

12. You are given a list of the form:  $l = [\dots, 1, 2, 4, 5, \dots]$  (with an “unkown” number of first and last elements). Use methods for lists to produce a corrected list which contains the number 3 between 2 and 4:

```
l = [\dots, 1, 2, 3, 4, 5, \dots]
```

13. You are given strings of web domains of the form:  $s = \text{'www.example.com'}$ . You want to strip the **'www.'** and the **'.com'**. Use string methods to achieve this.

14. Write a Python program to get the part of the string

```
link = 'https://play.spotify.com/collection/albums'
```

before the last **'/'** character. You should get

```
'https://play.spotify.com/collection'
```

15. **Hard!** Write a program to swap comma and dot in a string. In particular turn the string

```
dot_comma = "32.054,23"
```

into

```
comma_dot = "32,054.23"
```

*Hint:* look up the string methods **maketrans** and **translate**.