

# CS 171

## Lab Assignment 2

### Data Types

This lab assignment use many elements provided in the main bibliographic reference for these lectures:

Programming in Python 3

A Complete Introduction to the Python Language,  
2nd Edition,  
Mark Summerfield

## 1 Exercises

**Exercise 1** *Write a program that asks a two-digit positive integer number to the user, and outputs on separate lines each of its digits.*

*An example of the execution of such program is:*

```
$ Please enter a number: 15
1
5
```

□

**Exercise 2** *Write a program that asks the user a number of seconds, and shows the equivalent in days, hours, minutes and seconds.*

*An example of the execution of such program is:*

```
$ Please enter the number of seconds: 105747
105747 seconds correspond to 1 day, 5 hours, 22 minutes and 27 seconds
```

□

**Exercise 3** *Write a program that checks whether a string entered by the user is a palindrome. A string is a palindrome if it reads the same left to right and right to left.*

*An example of the execution of such program is:*

```
$ Please enter a string: madam
madam is a palindrome
```

□

**Exercise 4** *Write a program that, given a sentence entered by the user, counts the number of words in the sentence, and outputs the longest word in the sentence.*

*One example of the execution of such program is:*

```
$ Please enter a sentence: This is a nice statement.
The sentence has 5 sentences and the longest word is statement.
```

□

**Exercise 5** *Having reached this point, you are strongly encouraged to:*

- 1. Study in detail the example programs that are described in Chapter 2, Section Examples, starting on page 94 of the reference book;*
- 2. Provide solutions to the exercises in the same Chapter, Section Exercises, which start on page 104.*

□