Python 101: Homework 1

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This assignment aims to refresh what you've learnt in class, it should not take longer than 1 hour to complete. Please submit it to daschapopowa@gmail.com no later than by noon, 09.15. The subject of the e-mail should say Python 101: HW1: Your Name.

Please register on piazza (`https://piazza.com/hse.ru/fall2018/python101`) to discuss this assignment (discussions on piazza will boost your participation grade) and to receive course-related announcements.

1 Basic Datatypes: 2 points

List datatypes that we've learnt last Saturday (6 major types). For each type, list two functions that we can apply to them, desribe in one sentence what the result of the function application would be.

(1) Datatype: *list*
1. x.append() – this method adds an element at the end of the list x
2. x.pop(1) – this method removes an element at a specified index position in the list x (1 in this case). The method returns that element, altering the list at the same time.

2 Comparisons: 2 points

What do the following numeric comparisons mean when they are applied to strings?

- ==
- !=
- >
- >=
- <
- <=

(2) A HINT: 'flower' < 'zebra' precedes alphabetically

3 Semitic morphology: 2 points

Semitic morphology involves intercalating vowels and consonants to express morphological categories. For example, the Arabic root k,t,b occurs in at least the following forms: *katab-a* 'he wrote', *kaatab-a* 'he corresponded', *kutib- a* 'it was written', *kitab* 'book', *kuttaab* 'writers', *uktub* 'write!', etc.

How might you use $format()$ to describe this system? Give a sample representation for the root k,t,b and how $format()$ could be used to express different categories.

4 Pragmatics: 2 points

x = 'The bartender... absolutely horrible... we waited 10 min before we even got her attention... and then we had to wait 45 – FORTY FIVE! – minutes for our entrees... stalk the waitress to get the cheque... she didn't make eye contact or even break her stride to wait for a response ...'

What will happen if we apply lower() to the string x?

What information will we lose when lower() is applied to x?

List one linguistic task where the application of lower() to x is useful and one task where it is harmful.

5 Funky Dictionary: 2 points

List commands that would do the following:

- create a dictionary d that contains 20 words in your native language that, you think, a non-native speaker of your native language might not know with definitions in English;
- test that your dictionary contains 20 pairs;
- test whether a given key is in the dictionary;
- delete an entry (a key-value pair);
- add an entry;
- print a list of keys;
- print a list of values;
- print a list of key-value pairs.