

Fall Semester 2017
Iowa State University

LING 120 - Language and Computers

Assignment 1

Submission Deadline: 8 SEP 2017, end of the day

Instructions: This assignment consists of two questions and carries a total of 10 marks. Submit your assignment as a *PDF* file and name it as: `your_first_name-your_last_name.pdf` Late submissions are allowed, but will not be awarded full credit.

Question 1 - 4 marks

Your first question has three parts, and is on encoding text on a computer.

1. Write "America" in ASCII, with both decimal number and binary representation.
2. What are the Unicode character ranges for Telugu, Japanese, Russian?
3. Get the Greek translation for the word "Computer" from Google translate. Now, use this website: <http://r12a.github.io/apps/conversion/> and get the ASCII, UTF-8 and UTF-16 representations of this Greek word. Do they all look the same, or different? Why?

Question 2 - 6 marks

Your second question is something similar to Question 5 in Chapter 1. Install Praat or any other speech analysis software kit on your computer. 3 speech samples (from: <http://codewelt.com/proj/speak>) are attached with this assignment description. Compare and contrast the spectrograms of these 3 samples by describing how what was said in the samples correspond to the spectrogram, and what kind of differences exist between the spectrograms.