Report - Second NLP Project

Group: 21

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In the a section, all required transducers contain the initial state that accept all possible symbols, the other states are specific for the word type. For verb conjugation transducers, the following 2 states make sure that the word finishes in 'ar', the proceeding transitions deal with the conjugation rules. In the same line of thought, in the noun transducer we make sure the word ends with an 'o', and in the adverb transducer the adjective lemma finishes in 'mente' before the tags.

For the b section, we decided to do a **fstunion** over the *lemma2verbip*, *lemma2verbis* and the *lemma2verbif* to form the *lemma2verb* transducer. For the *lemma2word* transducer, we performed another **fstunion** between *lemma2noun* and *lemma2adverb*, and then *lemma2verb*.

For the c section, we simply performed an **fstinvert** on the *lemma2word* obtaining the inverted transducer *word2lemma*.

During the development, we also created a series of tests for each transducer to assure that they were well built and to quickly figure out where the mistake could be.