School of Computing and Information Systems
The University of Melbourne
COMP90049 Knowledge Technologies (Semester 2, 2017)
Workshop exercises: Week 4

Suppose that we have observed the token `lended`, and we have a dictionary as follows:

```
addendum
blenders
commodity
deaden
end
leader
leant
lent
lemonade
pleading
```

1. Which, if any, of the above dictionary entries would be returned using a Neighbourhood Search with a neighbourhood of 1? 2? 3?
2. With respect to the input string `lended` and the dictionary entry `deaden`, calculate the following:
   (a) the Global Edit Distance, using the parameter $[m, i, d, r] = [+1, -1, -1, -1]$
   (b) the Local Edit Distance, using the parameter $[m, i, d, r] = [+1, -1, -1, -1]$
   (c) the N-Gram Distance, using $n = 2$
3. Find the best approximate match (or matches, if there are ties) in the dictionary for the string `lended`, based on the following methods; consider different parameters where necessary:
   (a) the Global Edit Distance
   (b) the Local Edit Distance
   (c) the N-Gram Distance
   (d) Soundex
4. Assuming that the "correct" (intended) dictionary entry was `lent`, calculate the precision of each of the above methods of finding approximate entries from the dictionary.