J&M3.6

Text, letter

Description automatically generated

J&M3.8

File: unsmoothed.py

J&M4.3

Text, letter

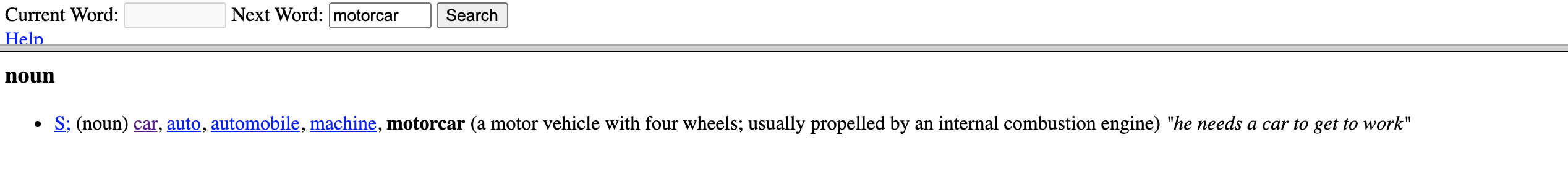
Description automatically generated

Your Turn: Write down all the senses of the word dish that you can think of. Now, explore this word with the help of WordNet, using the same operations shown earlier.

Text

Description automatically generated

Your Turn: Try out NLTK’s convenient graphical WordNet browser: nltk.app.wordnet(). Explore the WordNet hierarchy by following the hypernym and hyponym links.



Text

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

A picture containing graphical user interface, text

Description automatically generated

Graphical user interface, text, letter

Description automatically generated

EX2.8.5

File: wordnet.py

Result:

[Synset('body.n.01'), Synset('body.n.02'), Synset('body.n.03'), Synset('body.n.04'), Synset('torso.n.01'), Synset('body.n.06'), Synset('consistency.n.01'), Synset('body.n.08'), Synset('body.n.09'), Synset('soundbox.n.01'), Synset('body.n.11'), Synset('body.v.01')]

[]

[Synset('arm.n.01'), Synset('articulatory\_system.n.01'), Synset('body\_substance.n.01'), Synset('cavity.n.04'), Synset('circulatory\_system.n.01'), Synset('crotch.n.02'), Synset('digestive\_system.n.01'), Synset('endocrine\_system.n.01'), Synset('head.n.01'), Synset('leg.n.01'), Synset('lymphatic\_system.n.01'), Synset('musculoskeletal\_system.n.01'), Synset('neck.n.01'), Synset('nervous\_system.n.01'), Synset('pressure\_point.n.01'), Synset('respiratory\_system.n.01'), Synset('sensory\_system.n.02'), Synset('torso.n.01'), Synset('vascular\_system.n.01')]

[]

[]

[]

[]

EX2.8.14

File: wordnet.py

Result:

a motor vehicle with four wheels; usually propelled by an internal combustion enginehypernyms: a self-propelled wheeled vehicle that does not run on railshyponyms: a vehicle that takes people to and from hospitalsa car that has a long body and rear door with space behind rear seata car that is old and unreliablea car driven by a person whose job is to take passengers where they want to go in exchange for moneya small and economical cara car that has top that can be folded or removeda car with two doors and front seats and a luggage compartmenta car in which policemen cruise the streets; equipped with radiotelephonic communications to headquartersa car that is powered by electricitya car with relatively low fuel efficiencya car that resembles a convertible but has a fixed rigid topa car having a hatchback dooran early term for an automobilea car modified to increase its speed and accelerationa car suitable for traveling over rough terrainlarge luxurious car; usually driven by a chauffeura car that is lent as a replacement for one that is under repaira car that is even smaller than a subcompact cara small box-shaped passenger van; usually has removable seats; used as a family carthe first widely available automobile powered by a gasoline engine; mass-produced by Henry Ford from 1908 to 1927a high-performance car that leads a parade of competing cars through the pace lap and then pulls off the coursea fast car that competes in racesan open automobile having a front seat and a rumble seata car that is closed and that has front and rear seats and two or four doorsa high-performance four-wheel drive car built on a truck chassisa small low car with a high-powered engine; usually seats two personsa steam-powered automobilea car kept in dealers' stock for regular salesa car smaller than a compact carlarge open car seating four with folding topa car that has been previously owned; not a new car

EX2.8.27

File: wordnet.py

Result:

noun:1.8525012470361537

verb:5.098255280073462

adj.:2.0537856847331404

3.Find longest sentence in “Moby Dick by Herman Melville 1851”

File: longest.py

Result:

Though in many natural objects, whiteness refiningly enhances beauty, as if imparting some special virtue of its own, as in marbles, japonicas, and pearls; and though various nations have in some way recognised a certain royal preeminence in this hue; even the barbaric, grand old kings of Pegu placing the title " Lord of the White Elephants " above all their other magniloquent ascriptions of dominion; and the modern kings of Siam unfurling the same snow - white quadruped in the royal standard; and the Hanoverian flag bearing the one figure of a snow - white charger; and the great Austrian Empire, Caesarian, heir to overlording Rome, having for the imperial colour the same imperial hue; and though this pre - eminence in it applies to the human race itself, giving the white man ideal mastership over every dusky tribe; and though, besides, all this, whiteness has been even made significant of gladness, for among the Romans a white stone marked a joyful day; and though in other mortal sympathies and symbolizings, this same hue is made the emblem of many touching, noble things--the innocence of brides, the benignity of age; though among the Red Men of America the giving of the white belt of wampum was the deepest pledge of honour; though in many climes, whiteness typifies the majesty of Justice in the ermine of the Judge, and contributes to the daily state of kings and queens drawn by milk - white steeds; though even in the higher mysteries of the most august religions it has been made the symbol of the divine spotlessness and power; by the Persian fire worshippers, the white forked flame being held the holiest on the altar; and in the Greek mythologies, Great Jove himself being made incarnate in a snow - white bull; and though to the noble Iroquois, the midwinter sacrifice of the sacred White Dog was by far the holiest festival of their theology, that spotless, faithful creature being held the purest envoy they could send to the Great Spirit with the annual tidings of their own fidelity; and though directly from the Latin word for white, all Christian priests derive the name of one part of their sacred vesture, the alb or tunic, worn beneath the cassock; and though among the holy pomps of the Romish faith, white is specially employed in the celebration of the Passion of our Lord; though in the Vision of St .

4.

Perplexity is the inverse probability of the test set, normalized by the number of words.

Lexical diversity is a measure of how many different words that are used in a text.

Both of the measurements indicate the probability distribution.

These are metrics that are used to judge how good a language model is! (Content is important)