how to use feature_lookup.js

by n.s. dawn

[nsdawn.dev/linguistics/feature_lookup/]

ABOUT THE NEW JAVASCRIPT VERSION

`feature_lookup.js` is a JavaScript environment that facilitates access and analysis of phonological features. it is a translation of a previous Python application, available here:

> raw source:
> https://github.com/NSDawn/FeatureLookup2022
> replit (in browser):
> https://replit.com/@NSDawn/FeatureLookup2022?v=1#
> (use the Play button [▶] to run the program.)

the new JavaScript environment:

- makes it easier to interact with the program, with better aesthetics.
- saves progress even if you leave the site
- supports mobile

GETTING STARTED

if this is your first time at the site, the following text should appear.

```
Welcome to feature_lookup.js.
[*] 2022 Version
Type 'help' for help.
```

to start, try typing `help` into the program, and hit Enter.

```
$ help
...
```

a large block of text should show up, explaining how the program is to be used. you can use this to quickly check how a certain command is used, but feel free to use this document instead.

⚠ there are two versions of this program available, one made in 2021 based on Hayes (2005), and one edited for use in 2022. Make sure you're using the right version, for your usage. The examples shown in this document are based on the 2022 Version.

THE 'CLEAR' COMMAND

the `clear` command allows the user to access lists of phones and features. this command can be abbreviated as `c` for ease of typing.

if you type `clear` and then proceed to click Enter, it will clear everything out of the terminal window.

THE 'LIST' COMMAND

the `list` command allows the user to access lists of phones and features. this command can be abbreviated as `l` for ease of typing.

typing `list` alone will give a list of all phones in the program's dataset. this can be helpful to copy-paste the characters for other uses.

```
$ list
i ɪ u ʊ e ɛ o ɔ
a ɑ æ y ɤ ø œ ɘ
ʌ ɯ ɨ j w ɥ m n
ɳ ɲ ŋ ɴ l ɭ ʎ r
ɽ ʀ t d ʈ ɖ s z
ɬ ɮ θ ð ʃ ʒ c ɟ
ç ʝ tʃ dʒ ts dz pf bv
```

```
p b ɸ β f v k g
x ɣ q ɢ χ ʁ ħ ʕ
ʔ h ɦ
```

typing `list` with a phone will give you all the feature values for that phone.

```
$ list œ
syllabic: [+]
vocalic: [+]
high: [-]
low: [-]
back: [-]
round: [+]
atr: [-]
sonorant: [+]
approximant: [+]
coronal: [0]
anterior: [0]
distributed: [0]
dorsal: [+]
labial: [+]
pharyngeal: [+]
continuant: [+]
strident: [0]
lateral: [-]
nasal: [-]
voice: [+]
aspirated: [-]
glottalized: [-]
```

⚠ due to encoding issues, special characters (ŋ, ɯ, ɳ, etc.) you enter from other documents may not work. to prevent this from occurring, i recommend that you use `list` to get a list of all phones, and copy-paste symbols directly from there.

typing `list` with a feature value will list all phones in the program's dataset of that specification. important: you must type the feature name and then a feature value (+, -, or 0).

```
$ list sonorant -
t d ʈ ɖ s z ɬ ɮ
```

```
θ ð ʃ ʒ c ɟ ç ʝ
tʃ dʒ ts dz pf bv p b
ɸ β f v k g x ɣ
q ɢ χ ʁ ħ ʕ ʔ h
ɦ
```

standard abbreviations can be used for all features. when you use such an abbreviation, the program will let you know what it interpreted your command to be.

```
$ list son -
Interpreted: $ list sonorant -
t d ʈ ɖ s z ɬ ɮ
θ ð ʃ ʒ c ɟ ç ʝ
tʃ dʒ ts dz pf bv p b
ɸ β f v k g x ɣ
q ɢ χ ʁ ħ ʕ ʔ h
ɦ
```

a list of acceptable abbreviations is available at the end of this document.

THE 'COMPARE' AND 'CONTRAST' COMMANDS

the `compare` and `contrast` commands are used to check the features of phones in relation to each other. they can be abbreviated as `com` and `con`, for ease of typing.

the `compare` command lists all phoneme values that are identical between phones. you may compare two features as shown.

```
S compare h s
syllabic: [-]
vocalic: [-]
high: [0]
low: [0]
back: [0]
round: [-]
atr: [0]
sonorant: [-]
approximant: [-]
dorsal: [-]
labial: [-]
```

```
pharyngeal: [-]
continuant: [+]
lateral: [-]
nasal: [-]
voice: [-]
aspirated: [+]
glottalized: [-]
```

the `compare` command can use any number of phones, and will give the similarities between all phones listed.

```
$ compare i j k w
high: [+]
low: [-]
anterior: [0]
distributed: [0]
dorsal: [+]
lateral: [-]
nasal: [-]
aspirated: [-]
glottalized: [-]
```

the `contrast` command gives the feature values that differ between the two phones listed. this requires exactly two phonemes.

```
$ contrast s l
sonorant: [-/+]
approximant: [-/+]
strident: [+/0]
lateral: [-/+]
voice: [-/+]
aspirated: [+/-]
```

THE 'SET' COMMAND

the `set` command is extremely powerful, allowing the user to hold on to a set of phonemes between commands, and to add, delete, and filter phonemes from this set.

if you type `set` on its own, it will print your current set. if it's empty, it will tell you so.

```
$ set
i ɪ u ʊ e ɛ o ɔ
a ɑ æ y ɤ ø œ ɘ
ʌ ɯ ɨ j w ɥ m n
ɳ ɲ ŋ ɴ l ɭ ʎ r
ʏ ʀ
```

```
$ set
Set is empty. Enter 'set add all'
to add all phonemes.
```

to add all phonemes into your set, type `set add all`.

```
$ set add all
i ɪ u ʊ e ɛ o ɔ
a ɑ æ y ɤ ø œ ɘ
ʌ ɯ ɨ j w ɥ m n
ɳ ɲ ŋ ɴ l ɭ ʎ r
ʏ ʀ t d ʈ ɖ s z
ɬ ɮ θ ð ʃ ʒ c ɟ
ç ʝ tʃ dʒ ts dz pf bv
p b ɸ β f v k g
x ɣ q ɢ χ ʁ ħ ʕ
ʔ h ɦ
```

you can also use `set add` to add an arbitrary number of particular phonemes, or use it to add all phonemes of a particular feature specification.

```
$ set add i ɨ w ɥ n ɭ
i ɨ w ɥ n ɭ
```

```
$ set add continuant -
m n ɳ ɲ ŋ ɴ t d
ʈ ɖ tʃ dʒ ts dz pf bv
b ʔ
```

you can use `set delete` in the exact same ways as `set add` to delete particular phonemes or classes of phonemes from your set.

in order to quickly empty your set, type `set clear`.

```
$ set clear
Set cleared.
```

finally, `set filter` allows you to filter for all phonemes of a particular feature specification. this is helpful for testing natural classes.

```
$ set add vocalic -
m n ɳ ɲ ŋ ɴ l ɭ
ʎ r ɽ ʀ t d ʈ ɖ
s z ɬ ɮ θ ð ʃ ʒ
c ɟ ç ʝ tʃ dʒ ts dz
pf bv p b ɸ β f v
k g x ɣ q ɢ χ ʁ
ħ ʕ ʔ h ɦ

$ set filter high +
ɲ ŋ ʎ ʃ ʒ c ɟ ç
ʝ tʃ dʒ k g x ɣ
```

ABBREVIATIONS

the following are all abbreviations natively understood by the program.

(2022)

commands		**features**			
c	clear	syll	syllabic	dor	dorsal
l	list	voc	vocalic	lab	labial
com	compare	hi	high	phar	pharyngeal
con	contrast	lo	low	cont	continuant
s	set	bk	back	str	strident
set arguments		rd	round	nas	nasal
a	add	son	sonorant	lat	lateral
d or del	delete	approx	approximant	voi	voice
f	filter	cor	coronal	asp	aspirated
c	clear	ant	anterior	glot	glottalized
* or .	all	dist	distributed		

(2021, Hayes 2005)

commands	**features**

c	clear	syll	syllabic	dor	dorsal
l	list	cons	consonantal	lab	labial
com	compare	hi	high	dlyd	delayed
con	contrast	lo	low	cont	continuant
s	set	bk	back	str	strident
set arguments		rd	round	nas	nasal
a	add	son	sonorant	lat	lateral
d or del	delete	approx	approximant	voi	voice
f	filter	cor	coronal	tens	tense
c	clear	ant	anterior	sgl	spr.gl
* or .	all	dist	distributed	cgl	constr.gl
		trl	trill		