



Reviving Test by Generation

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What is Test by Generation?

- A Feature of the Matrix Customization page
(<https://matrix.ling.washington.edu/customize/>)
- Allows you to test generating sentences using the grammar fragment being customized in the system/web page



Key Point: Quickly provides feedback about the range of strings the grammar can generate

Matrix customization and download page [\[documentation\]](#)

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Archive type: ☒ tar.gz ☐ .zip

Create Grammar

Test by Generation

```

1465     print(HTML_posttitle)
1466     delphin_dir = os.path.join(os.getcwd(), 'delphin')
=> 1467     sentences = generate.get_sentences(grammar_dir, delphin_dir, session)
1468     print(HTML_sentencesprebody)
1469     for i in range(len(sentences)):
sentences undefined, global generate = <module 'gmcs.generate' from '/home2/www-matrix/html/customize/gmcs/generate.py'>, generate.get_sentences = <function get_sentences>, grammar_dir =
'sessions/9105/eng', delphin_dir = '/home2/www-matrix/html/customize/delphin', session = '9105'
/home2/www-matrix/html/customize/gmcs/generate.py in get_sentences(grammar_dir='sessions/9105/eng', delphin_dir='/home2/www-matrix/html/customize/delphin',
session='9105')
400 # Wrap up all of the components involved in generation, and return the results
401 def get_sentences(grammar_dir, delphin_dir, session):
=> 402     (noun_rels_dets, det_rels, language) = get_n_predications(grammar_dir)
403     (itvs, stvs) = get_v_predications(grammar_dir, language)
404     templates = get_templates(grammar_dir)
noun_rels_dets undefined, det_rels undefined, language undefined, global get_n_predications = <function get_n_predications>, grammar_dir = 'sessions/9105/eng'
/home2/www-matrix/html/customize/gmcs/generate.py in get_n_predications(grammar_dir='sessions/9105/eng')
186         det_list.add(pline[1].rstrip())
187
=> 188     noun_rels_dets = remove_duplicates(noun_rels_dets)
189     # print "noun_rels_dets: <<", noun_rels_dets, ">><br />"
190
noun_rels_dets = [['_dog_n_rel', 'obl'], ['_pronoun_n_rel', 'imp']], global remove_duplicates = <function remove_duplicates>
/home2/www-matrix/html/customize/gmcs/generate.py in remove_duplicates(list=[['_dog_n_rel', 'obl'], ['_pronoun_n_rel', 'imp']])
141     while(list != []):
142         new_list.append(list[0])
=> 143     list = list(filter((lambda x: x[0] != list[0][0]), list))
144     return new_list
145
list = [['_dog_n_rel', 'obl'], ['_pronoun_n_rel', 'imp']], builtin filter = <class 'filter'>, x undefined

```

TypeError: 'list' object is not callable

args = ("list' object is not callable",)

with_traceback = <built-in method with_traceback of TypeError object>



Project Plan

- **Phase 1:** Get functionality back
- **Phase 2:** Add templates/generation options
- **Phase 3:** Documentation!

Status

- Almost 😄
- Brainstorming these today!
- No matter how far I get with this project I am **committing** to adding documentation 😞



Phase 1 Detail

1. Resolve the python error
2. (optional?) Validate the grammar
3. Generate sentences
4. Switch from LKB to ACE
5. Display the results
6. (optional) Display user friendly error messages on failures

Generated Sentences

Click on a sentence to view its parse tree and the mrs associated to that parse.
Capitalized lexical entries indicate that the lexical entry has undergone a spelling-changing lexical rule

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[To the LKB page](#)

What was this page supposed to look like and were there any complaints about it I should know about?

Phase 2 Detail

1. Verify the Add feature options work to generate templates
2. Iteratively add more templates that may be of interest

Test by Generation Options [\[documentation\]](#)

In this section, select the templates you wish to generate from, and the features you wish to specify on those templates

Select which templates you would like to use in generation. If nothing is selected, the simple transitive and intransitive templates and their features are specified

☐ Simple intransitive verb phrase

Features:



Name:

☒ argument structure

☐ information-structure meaning

Value:



Specified on:

Subject

Add a Feature

☐ Simple transitive verb phrase

Features:

Add a Feature



Phase 3 Detail

1. Update Documentation with current usage, any caveats, and any future developer work still needed

MatrixDoc_TestByGeneration

EmilyBender edited this page on Aug 29, 2012 · 1 revision

Documentation for the Grammar Matrix Customization Test By Generation Page

Introduction

The Test By Generation facility is partially described in [Bender et al 2010](#).

Options

- [This documentation is under construction. When it is more complete, this section should describe the effects of the various options provided in this library in terms of the behavior of the grammar. It is also a good place for tips on how to get the most from the library.]

Upcoming Work

- [This documentation is under construction. When it is more complete, this section should describe any modifications to or enhancements of this library that are either in progress or planned.]

References

Bender, Emily M., Scott Drellishak, Antske Fokkens, Michael Wayne Goodman, Daniel P. Mills, Laurie Poulson, and Safiyyah Saleem. 2010. [Grammar prototyping and testing with the LinGO Grammar Matrix customization system](#). In Proceedings of the ACL 2010 Software Demonstrations.

Questions?
