conceptnet-lite

Release 0.1.26

LDT team

Oct 24, 2019

CONTENTS:

CHAPTER

ONE

CONCEPTNET_LITE

1.1 Module contents

class conceptnet_lite.**PartOfEdge**

Bases: enum.Enum

An enumeration.

ANY = 'any'

END = 'end'

START = 'start'

conceptnet_lite.**connect**(*db_path='conceptnet.db'*, *db_download_url='https://conceptnet-lite.fra1.cdn.digitaloceanspaces.com/conceptnet.db.zip'*, *delete_compressed_db=True*, *dump_download_url='https://s3.amazonaws.com/conceptnet/downlo assertions-5.7.0.csv.gz'*, *load_dump_edge_count=34074917*, *delete_compressed_dump=True*, *delete_dump=True*)

Connect to ConceptNet database.

This function connects to ConceptNet database. If it does not exists, there are two options: to download ready database or to download the compressed ConceptNet dump, extract it, and load it into database (pass *db_download_url=None* for this option).

Parameters

- **db_path** (Union[Path, str]) – Path to the database.
- **db_download_url** (Optional[str]) – Link to compressed ConceptNet database. Pass *None* to build the db from dump.
- **delete_compressed_db** (bool) – Delete compressed database after extraction.
- **dump_download_url** (str) – Link to compressed ConceptNet dump.
- **load_dump_edge_count** (int) – Number of edges to load from the beginning of the dump file. Can be useful for testing.
- **delete_compressed_dump** (bool) – Delete compressed dump after unpacking.
- **delete_dump** (bool) – Delete dump after loading into database.

Return type None

conceptnet_lite.**edges**(*part_of_edge*, *concepts*, *relation=None*, *same_language=False*)

Return type ModelSelect

conceptnet_lite.**edges_between**(*start_concepts*, *end_concepts*, *relation=None*, *two_way=False*)

Return type ModelSelect

conceptnet_lite.**edges_for**(*concepts*, *relation=None*, *same_language=False*)

Return type ModelSelect

conceptnet_lite.**edges_from**(*start_concepts*, *relation=None*, *same_language=False*)

Return type ModelSelect

conceptnet_lite.**edges_to**(*end_concepts*, *relation=None*, *same_language=False*)

Return type ModelSelect

1.2 conceptnet_lite.db module

class conceptnet_lite.db.**Concept**(**args*, ***kwargs*)

Bases: conceptnet_lite.db._BaseModel

Concept ORM class.

Concept represents node in ConceptNet knowledge graph. It provides properties *language* and *text* that are aliases for corresponding *Label.language* and *Label.text* fields.

This abstraction is not present in the original ConceptNet. Class is introduced for the purposes of normalization.

DoesNotExist

alias of ConceptDoesNotExist

edges_in

edges_out

classmethod get(**query*, ***filters*)

id = <AutoField: Concept.id>

label = <ForeignKeyField: Concept.label>

label_id = <ForeignKeyField: Concept.label>

property language

Return type *Language*

sense_label = <TextField: Concept.sense_label>

property text

Return type str

property uri

Return type str

class conceptnet_lite.db.**Edge**(**args*, ***kwargs*)

Bases: conceptnet_lite.db._BaseModel

Edge ORM class.

See: https://github.com/commonsense/conceptnet5/wiki/Edges.

Everything except relation, start, and end nodes is stored in *etc* field that is plain dict.

DoesNotExist
alias of EdgeDoesNotExist

end = <ForeignKeyField: Edge.end>

end_id = <ForeignKeyField: Edge.end>

etc = <JSONField: Edge.etc>

classmethod get(**query*, ***filters*)

id = <AutoField: Edge.id>

relation = <ForeignKeyField: Edge.relation>

relation_id = <ForeignKeyField: Edge.relation>

start = <ForeignKeyField: Edge.start>

start_id = <ForeignKeyField: Edge.start>

property uri

Return type str

class conceptnet_lite.db.**Label**(**args*, ***kwargs*)
Bases: conceptnet_lite.db._BaseModel

Label ORM class.

Label can be seen as a part of *Concept*. *Label* is basically a text on a certain language (most often, a word).

This abstraction is not present in the original ConceptNet. Class is introduced for the purposes of normalization.

DoesNotExist
alias of LabelDoesNotExist

concepts

classmethod get(**query*, ***filters*)

id = <AutoField: Label.id>

language = <ForeignKeyField: Label.language>

language_id = <ForeignKeyField: Label.language>

text = <TextField: Label.text>

class conceptnet_lite.db.**Language**(**args*, ***kwargs*)
Bases: conceptnet_lite.db._BaseModel

Language ORM class.

See: https://github.com/commonsense/conceptnet5/wiki/Languages.

DoesNotExist
alias of LanguageDoesNotExist

id = <AutoField: Language.id>

labels

name = <TextField: Language.name>

class conceptnet_lite.db.**Relation**(**args*, ***kwargs*)
Bases: conceptnet_lite.db._BaseModel

Relation ORM class.

See: https://github.com/commonsense/conceptnet5/wiki/Relations.

DoesNotExist
alias of RelationDoesNotExist

edges

id = <AutoField: Relation.id>

name = <TextField: Relation.name>

property uri

Return type str

class conceptnet_lite.db.**RelationName**
Bases: object

Names of non-deprecated relations.

See: https://github.com/commonsense/conceptnet5/wiki/Relations.

ANTONYM = 'antonym'

AT_LOCATION = 'at_location'

CAPABLE_OF = 'capable_of'

CAUSES = 'causes'

CAUSES_DESIRE = 'causes_desire'

CREATED_BY = 'created_by'

DEFINED_AS = 'defined_as'

DERIVED_FROM = 'derived_from'

DESIRES = 'desires'

DISTINCT_FROM = 'distinct_from'

ETYMOLOGICALLY_DERIVED_FROM = 'etymologically_derived_from'

ETYMOLOGICALLY_RELATED_TO = 'etymologically_related_to'

EXTERNAL_URL = 'external_url'

FORM_OF = 'form_of'

HAS_A = 'has_a'

HAS_CONTEXT = 'has_context'

HAS_FIRST_SUBEVENT = 'has_first_subevent'

HAS_LAST_SUBEVENT = 'has_last_subevent'

HAS_PREREQUISITE = 'has_prerequisite'

HAS_PROPERTY = 'has_property'

HAS_SUBEVENT = 'has_subevent'

IS_A = 'is_a'

LOCATED_NEAR = 'located_near'

MADE_OF = 'made_of'

MANNER_OF = 'manner_of'

MOTIVATED_BY_GOAL = 'motivated_by_goal'

OBSTRUCTED_BY = 'obstructed_by'

PART_OF = 'part_of'

RECEIVES_ACTION = 'receives_action'

RELATED_TO = 'related_to'

SIMILAR_TO = 'similar_to'

SYMBOL_OF = 'symbol_of'

SYNONYM = 'synonym'

USED_FOR = 'used_for'

conceptnet_lite.db.**download_db**(*url='https://conceptnet-lite.fra1.cdn.digitaloceanspaces.com/conceptnet.db.zip'*, *db_path='conceptnet.db'*, *delete_compressed_db=True*)

Download compressed ConceptNet dump and extract it.

Parameters

- **url** (str) – Link to compressed ConceptNet database.
- **db_path** (Union[Path, str]) – Path to resulting database.
- **delete_compressed_db** (bool) – Delete compressed database after extraction.

Return type None

conceptnet_lite.db.**download_dump**(*url='https://s3.amazonaws.com/conceptnet/downloads/2019/edges/conceptnet-assertions-5.7.0.csv.gz'*, *out_dir_path=PosixPath('/home/docs/checkouts/readthedocs.lite/checkouts/latest/docs/source')*)

Download compressed ConceptNet dump.

Parameters

- **url** (str) – Link to the dump.
- **out_dir_path** (Union[Path, str]) – Dir where to store dump.

conceptnet_lite.db.**extract_compressed_dump**(*compressed_dump_path*, *delete_compressed_dump=True*)

Extract compressed ConceptNet dump.

Parameters

- **compressed_dump_path** (Union[Path, str]) – Path to compressed dump to extract.
- **delete_compressed_dump** (bool) – Delete compressed dump after extraction.

conceptnet_lite.db.**load_dump_to_db**(*dump_path*, *db_path*, *edge_count=34074917*, *delete_dump=True*)

Load dump to database.

Parameters

- **dump_path** (Union[Path, str]) – Path to dump to load.
- **db_path** (Union[Path, str]) – Path to resulting database.

- **edge_count** (int) – Number of edges to load from the beginning of the dump file. Can be useful for testing.
- **delete_dump** (bool) – Delete dump after loading into database.

conceptnet_lite.db.**prepare_db**(*db_path*, *dump_download_url='https://s3.amazonaws.com/conceptnet/downloads/2019/ea assertions-5.7.0.csv.gz'*, *load_dump_edge_count=34074917*, *delete_compressed_dump=True*, *delete_dump=True*)

Prepare ConceptNet database.

This function downloads the compressed ConceptNet dump, extracts it, and loads it into database. First two steps are optional, and are executed only if needed.

Parameters

- **db_path** (Union[Path, str]) – Path to the resulting database.
- **dump_download_url** (str) – Link to compressed ConceptNet dump.
- **load_dump_edge_count** (int) – Number of edges to load from the beginning of the dump file. Can be useful for testing.
- **delete_compressed_dump** (bool) – Delete compressed dump after extraction.
- **delete_dump** (bool) – Delete dump after loading into database.

1.3 database schema

CHAPTER

TWO

INDICES AND TABLES

- genindex
- modindex
- search

PYTHON MODULE INDEX

C

INDEX

I

L

M

N

O

P

R

S

T

U