**NARS in Python – Technical Documentation**

**Concept**

*Conceptualizing* is the process of creating a new Concept, named by a term.

Each Concept contains:

* A belief table, holding processed *judgments* about the concept. Terms that contain no copula will have empty belief tables.
* A desire table, holding process *goals* about the concept. . Terms that contain no copula will have empty desire tables.
* A dictionary of *task-links*.
* A dictionary of *term-links*.

**Concept Tables**

Concept tables (belief table and desire table) are Max Heaps that store Narsese Sentences sorted by their Confidence. When the table overflows, the sentence with the lowest Confidence is purged.

**Task Processing Algorithms:**

*Initial processing* occurs the first time a task is selected.

*Continued processing* occurs after initial processing, and subsequently whenever the task is selected again.

* Judgment:
  + Initial Processing
    1. The judgment’s immediate subterms (subject and predicate) are conceptualized.
    2. The judgment itself is conceptualized, and term-linked to its subject and predicate concepts.
    3. If the belief table in the judgment’s concept is empty:
       1. The task’s judgment is added directly to the belief table.
       2. **END**
    4. If the belief table in the judgment’s concept is not empty:
       1. Iterate through the table until a belief is found without overlapping evidential base.
          - If such a belief is found:

Remove it from the belief table.

Merge the task’s judgment into the belief

Return the belief into the belief table

* + - * + If no such belief is found:

Insert the judgment into the table directly

* + Continued Processing
* Question:
  + Initial Processing
    1. TBD
  + Continued Processing
    1. TBD
* Goal:
  + Initial Processing
    1. TBD
  + Continued Processing
    1. TBD