**NARS in Python – Technical Documentation**

**Object Classes and Data Structures**

**Task**A Task can be *input* or *derived*. Derived Tasks contain sentences which have 2 or more pieces of evidence in its evidential base.

Each Task has a Stamp, which contains the Task’s metadata.

**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*.

**Tables**Tables (belief table and desire table) are stored in Concepts. They are Max Heaps that store Narsese Sentences sorted by Confidence. When the Table overflows, the Sentence with the lowest Confidence is purged.

**Bag**TBD

**Buffer**TBD

**Algorithms**

**Main Control Loop:**

**Task Processing:***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 PROCESSING**
    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

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