Named Entity Linking (NEL), also known as Entity Linking or Entity Resolution, is a task in Natural Language Processing (NLP) that involves identifying entities mentioned in text and linking them to a unique identifier in a knowledge base. This process enables the disambiguation of entities that might have the same name (homonyms) or different names referring to the same entity (synonyms) by associating each mention with a precise entity in a structured database, such as Wikipedia, Wikidata, or any domain-specific knowledge base.

The process of Named Entity Linking typically involves several steps:

1. **Named Entity Recognition (NER):** The first step usually involves detecting and classifying the named entities in the text into predefined categories such as person names, organizations, locations, dates, etc.

2. **Entity Disambiguation:** Once entities are recognized, the next step is to disambiguate them. This means determining exactly which entity in the real world the mention refers to, especially when an entity name could refer to multiple candidates. For example, the name "Jordan" could refer to a country, a river, or a person's name. Disambiguation involves understanding the context in which the name is used to link it to the correct entity.

3. **Entity Linking:** After disambiguating the entities, each entity mention is linked to a unique identifier in a knowledge base. This step solidifies the connection between the text and structured data, enriching the text with a layer of semantic information that can be further used for various applications like semantic search, content recommendation, knowledge graph construction, and more.

NEL is a complex task because it requires not only understanding the context in which a named entity is mentioned but also having comprehensive knowledge about the entities themselves, including their attributes and relationships with other entities. This requires sophisticated algorithms that can handle natural language ambiguities, variations, and the vast scale of knowledge bases. Techniques used in NEL often involve a combination of machine learning, natural language understanding, and information retrieval methods.