**Semantic relationship:**

Now what is semantic? Literal meaning of semantic is the study of meaning in language so semantic a relationship means to establish relationship in a way so the things are related by their meanings.

Example:

Residence and house are related because it referes to accommodation

cat, dog, lions, tigers are related because they refer to animals, for further refinement cat and dog are related because they refer domestic animal or pet, similarly lions and tigers are related because they refer wild animals.

Types of semantic relationship:

Synonymy (same meaning. Example: joy or happy)

Antonymy (opposite meaning. Example: hot and cold)

Hyponymy (specific instance of general word. Example: Marigold is hypernym of flower)

Hypernymy (one word is a more general term for more specific words. Example: Vehicle is a hypernym of car)

Meronymy (A part-to-whole relationship. Example: wheel is meronym of car)

Holonymy: (Whole-to-part relationship. Example: Car is a holonym of wheel)

Polysemy: (A single word that has multiple related meanings. Example: Bank can mean the side of a river or a financial institution)

Homonymy: (Words that sound alike but have different meanings. Example: "Bark" (sound made by a dog) and "bark" (outer layer of a tree)).

After understanding these semantic relationships, we shall be good to structure and meaning of language and helps us in natural language processing tasks.