1. **Implement transformation-based tagging using a set of transformation rules, apply simple rules to tag words using Python.**

**Aim:**

To implement transformation-based tagging using a set of transformation rules, apply simple rules to tag words using Python.

**Code:**

import nltk

from nltk.tag import brill, brill\_trainer

nltk.download('treebank')

nltk.download('averaged\_perceptron\_tagger')

from nltk.corpus import treebank

train\_sents = treebank.tagged\_sents()[:3000]

baseline\_tagger = nltk.tag.UnigramTagger(train\_sents, backoff=nltk.tag.DefaultTagger('NN'))

trainer = brill\_trainer.BrillTaggerTrainer(baseline\_tagger, brill.brill24(), deterministic=True)

brill\_tagger = trainer.train(train\_sents)

sentence = input("Enter a sentence: ").split()

tagged\_sentence = brill\_tagger.tag(sentence)

print("POS Tagged Sentence:", tagged\_sentence)

**Input:**

Enter a sentence: The cats are jumping on the bed.

**Output:**

POS Tagged Sentence: [('The', 'DT'), ('cats', 'NN'), ('are', 'VBP'), ('jumping', 'VBG'), ('on', 'IN'), ('the', 'DT'), ('bed.', 'NN')]

