

```
import nltk
nltk.download('punkt_tab')

→ [nltk_data] Downloading package punkt_tab to /root/nltk_data...
[nltk_data]  Unzipping tokenizers/punkt_tab.zip.
True

import nltk
from nltk.tokenize import word_tokenize

# Input sentences
sentences = [
    "Hello there!",
    "How are you doing?",
    "I am learning NLP.",
    "Hey! Good to see you.",
    "Where is the library?"
]

# Greeting keywords
greeting_keywords = {'hello', 'hi', 'hey', 'greetings'}

def classify_sentence(sentence):
    tokens = word_tokenize(sentence.lower())

    # Rule 1: Greeting if it contains greeting words
    if any(word in greeting_keywords for word in tokens):
        return "Greeting"

    # Rule 2: Question if sentence ends with '?'
    if sentence.strip().endswith('?'):
        return "Question"

    # Rule 3: Look for WH-words (e.g., what, where, who)
    wh_words = {'what', 'where', 'when', 'who', 'why', 'how'}
    if any(word in wh_words for word in tokens):
        return "Question"

    # Rule 4: Default to Statement
    return "Statement"

# Classify and print results
for s in sentences:
    result = classify_sentence(s)
    print(f"'{s}' => {result}")
```

```
→ 'Hello there!' => Greeting
  'How are you doing?' => Question
  'I am learning NLP.' => Statement
  'Hey! Good to see you.' => Greeting
  'Where is the library?' => Question
```