


```
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