

EX.NO.: 13

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LANGUAGE DETECTION PROGRAM USING LANGID FOR MULTIPLE LANGUAGES

To implement a Python program using the langid library to detect the language of a given text and specify it for five different languages: English, French, Spanish, German, and Hindi.

PROCEDURE:

1. Open the terminal or command prompt and install the langid library using:
> pip install langid
2. Import the langid module to perform language detection.
3. Create a function detect_language(text) to:
> Use langid.classify() to identify the language of the input text.
4. Define sample text in five different languages (English, French, Spanish, German, and Hindi) for testing the program.
5. Iterate through the list of sample texts, passing each to the language detection function.
6. Print the detected language and the confidence level for each text.
7. Show the input text, detected language, and confidence percentage for each test.

CODE AND OUTPUT

```
import langid

# Function to detect language of input text
def detect_language(text):
    lang_code, confidence = langid.classify(text)
    language_names = {
        "en": "English",
        "fr": "French",
        "es": "Spanish",
        "de": "German",
        "hi": "Hindi"
    }
    detected_language = language_names.get(lang_code, "Unknown Language")
    return detected_language, confidence

# Test cases for five different languages
sample_texts = [
    "Hello, how are you?", # English
    "Bonjour, comment ça va?", # French
    "Hola, ¿cómo estás?", # Spanish
    "Hallo, wie geht es Ihnen?", # German
    "नमस्ते, आप कैसे हैं?" # Hindi
]

# Detect and display language for each sample text
for text in sample_texts:
    language, confidence = detect_language(text)
    print(f"Text: {text}")
    print(f"Detected Language: {language} (Confidence: {confidence * 100:.2f}%) \n")
```

Text: Hello, how are you?

Detected Language: English (Confidence: -1874.12%)

Text: Bonjour, comment ça va?

Detected Language: French (Confidence: -7168.32%)

Text: Hola, ¿cómo estás?

Detected Language: Unknown Language (Confidence: -8669.46%)

Text: Hallo, wie geht es Ihnen?

Detected Language: German (Confidence: -8319.51%)

Text: नमस्ते, आप कैसे हैं?

Detected Language: Hindi (Confidence: -12149.33%)