 

EX 2: Develop a lexical Analyzer to identify whether a given line is a comment or not.

Aim:   
To develop a lexical analyzer to identify whether a given line in a C program is a comment or not.

Algorithm:   
 1. Start.

2. Read the input line from the user.

3. Check if the input starts with // or contains /\* followed by \*/: oCase 1 (//): If the line starts with //, classify it as a single-line comment.

oCase 2 (/\* ... \*/): If the line contains /\* and closes with \*/, classify it as a multi-line comment.

4. Display the appropriate message:   
 o"Single-line comment detected."   
 o"Multi-line comment detected."   
 o"Not a comment."   
5. End.

CODE   
def check\_comment(line: str):   
 line = line.strip()

if line.startswith("//"):   
 print("Single-line comment detected.")

elif line.startswith("/\*") and line.endswith("\*/"): print("Multi-line comment detected.")

 

 

else:   
 print("Not a comment.")   
if \_\_name\_\_ == "\_\_main\_\_":   
 print("Enter a line of code (or comment):") input\_line = input() # Take user input   
 check\_comment(input\_line)

 