9.All languages have Grammar. When people frame a sentence we usually say whether the sentence is framed as per the rules of the Grammar or Not. Similarly use the same ideology , implement to check whether the given input string is satisfying the grammar or not .

#include <stdio.h>

#include <stdbool.h>

#include <ctype.h>

#include <string.h>

bool is\_punctuation(char c) {

    return (c == '.' || c == '?' || c == '!');

}

bool is\_whitespace(char c) {

    return (c == ' ' || c == '\t' || c == '\n');

}

bool is\_valid\_sentence(char \*sentence) {

    int len = strlen(sentence);

    int i = 0;

    while (i < len && is\_whitespace(sentence[i]))

        i++;

    if (i == len || is\_punctuation(sentence[i]))

        return false;

    bool seen\_space = false;

    bool seen\_letter = false;

    for (; i < len; i++) {

        if (is\_whitespace(sentence[i])) {

            if (seen\_space)

                return false;

            seen\_space = true;

            seen\_letter = false;

        } else if (is\_punctuation(sentence[i])) {

            if (i != len - 1)

                return false;

            if (!seen\_letter)

                return false;

        } else if (isalpha(sentence[i])) {

            seen\_space = false;

            seen\_letter = true;

        } else {

            return false;

        }

    }

    return true;

}

int main() {

    char input[1000];

    printf("Enter a sentence: ");

    fgets(input, sizeof(input), stdin);

    input[strcspn(input, "\n")] = 0

    if (is\_valid\_sentence(input))

        printf("Valid sentence.\n");

    else

        printf("Invalid sentence.\n");

    return 0;

}

Output:

