20 Ambiguous Grammar or NOT.

```c
#include <stdio.h>
#include <stdbool.h>
#include <string.h>
const char *productions[] = {
    "S -> S + S",
    "S -> S * S",
    "S -> id"
};

bool isAmbiguous(const char *input, int start, int end) {
    if (start == end) {
        return true;  // Single 'id' is ambiguous
    }
    for (int i = start + 1; i < end; i++) {
        if ((input[i] == '+' || input[i] == '*') &&
            isAmbiguous(input, start, i - 1) &&
            isAmbiguous(input, i + 1, end)) {
            return true;
        }
    }
    return false;
}

int main() {
    const char *input = "id*id*id*id";
    printf("Input: %s\n", input);

    if (isAmbiguous(input, 0, strlen(input) - 1)) {
        printf("The grammar is ambiguous for the given input.\n");
    } else {
        printf("The grammar is not ambiguous for the given input.\n");
    }

    return 0;
}
```

Output:

```
C:\Users\hp\OneDrive\Documents\Complier Design\20. Grammer or not.exe

Input: id*id*id*id
The grammar is not ambiguous for the given input.


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Process exited after 7.213 seconds with return value 0
Press any key to continue . . .
```