20. Write a C program to compute TRAILING( ) – operator precedence parser for the given grammar

CODE:

#include <stdio.h>

#include <stdlib.h>

#include <string.h>

#include <ctype.h>

#define MAX 10

char productions[MAX][MAX];

char trailing[MAX];

int n;

void findTRAILING(char c) {

if (!isupper(c)) {

strncat(trailing, &c, 1);

return;

}

for (int i = 0; i < n; i++) {

if (productions[i][0] == c) {

int len = strlen(productions[i]);

if (!isupper(productions[i][len - 1])) {

strncat(trailing, &productions[i][len - 1], 1);

} else {

findTRAILING(productions[i][len - 1]);

}

}

}

}

int main() {

printf("Enter the number of productions: ");

scanf("%d", &n);

printf("Enter the productions:\n");

for (int i = 0; i < n; i++) {

scanf("%s", productions[i]);

}

for (int i = 0; i < n; i++) {

trailing[0] = '\0';

findTRAILING(productions[i][0]);

printf("TRAILING(%c) = { %s }\n", productions[i][0], trailing);

}

return 0;

}

