**13)Write a C program to implement either Top Down parsing technique or Bottom Up Parsing technique to check whether the given input string is satisfying the grammar or not.**

**#include <stdio.h>**

**#include <stdlib.h>**

**#include <ctype.h>**

**char\* input;**

**char lookahead;**

**void S();**

**void B();**

**void match(char expected);**

**void match(char expected) {**

**if (lookahead == expected) {**

**lookahead = \*input++;**

**} else {**

**printf("Syntax error: expected %c\n", expected);**

**exit(1);**

**}**

**}**

**void S() {**

**match('a');**

**B();**

**match('a');**

**}**

**void B() {**

**if (lookahead == 'b') {**

**match('b');**

**B();**

**} else if (lookahead == 'c') {**

**match('c');**

**} else {**

**printf("Syntax error: unexpected character %c\n", lookahead);**

**exit(1);**

**}**

**}**

**void parse(char\* expr) {**

**input = expr;**

**lookahead = \*input++;**

**S();**

**if (lookahead == '\0') {**

**printf("Parsing successful\n");**

**} else {**

**printf("Syntax error: unexpected character %c at the end\n", lookahead);**

**}**

**}**

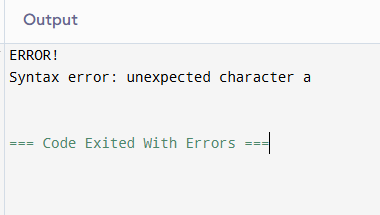
**int main() {**

**char expr[] = "abbbba";**

**parse(expr);**

**return 0;**

**}**

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