**Exp4:** **Write a C program to implement the Brute force technique of Top-down Parsing.**

**Consider the CFG: S -> cAd, A -> ab | a .**

#include <stdio.h>

#include <stdbool.h>

#include <string.h>

bool parse(char \*);

int main() {

char input[100];

printf("Enter a string to parse: ");

scanf("%s", input);

if (parse(input)) {

printf("String is successfully parsed.\n");

} else {

printf("Error in parsing string.\n");

}

return 0;

}

bool parse(char \*input) {

int index = 0;

if (input[index] == 'c') {

index++;

if (input[index] == 'a') {

index++;

if (input[index] == 'b' || input[index] == 'd') {

index++;

if (input[index] == 'd' || input[index] == '\0') {

return true;

}

}

}

}

return false;

}

**OUTPUT1:**

**Enter a string to parse: ccabdd**

**Error in parsing string.**

**OUTPUT2:**

**Enter a string to parse: cad**

**String is successfully parsed.**