

2022-09-14 (1).png

The screenshot shows a Windows desktop environment with an HP laptop logo at the bottom center. On the left, a Dev-C++ 5.11 window titled "Untitled1 cd4.cpp" displays C++ code for generating assembly code. On the right, a terminal window titled "C:\Users\srija\OneDrive\Desktop\cd4.exe" shows the program's output. The terminal window has two tabs: "enter the no: intermediate code:1" and "enter the 3 address code:1:a+c". The generated assembly code is:

```
the generated code is:  
mov c,R0  
mov R0,a
```

The Dev-C++ code is as follows:

```
1 #include<stdio.h>  
2 #include<conio.h>  
3 #include<string.h>  
4 int main()  
5 {  
6     int n,i,j;  
7     char a[50][50];  
8  
9     printf("enter the no: intermediate code:");  
10    scanf("%d",&n);  
11    for(i=0;i<n;i++)  
12    {  
13        printf("enter the 3 address code:%d:",i+1);  
14        for(j=0;j<6;j++)  
15        {  
16            if(j==0)  
17                scanf("%c",&a[i][j]);  
18        }  
19        printf("the generated code is:");  
20        for(i=0;i<n;i++)  
21        {  
22            printf("\n mov %c,R0d",a[i][3],i);  
23            if(a[i][4]=='-')  
24            {  
25                printf("\n sub %c,R0d",a[i][5],i);  
26            }  
27            if(a[i][4]=='+')  
28            {  
29                printf("\n add %c,R0d",a[i][5],i);  
30            }  
31            if(a[i][4]=='*')  
32            {  
33                printf("\n mul %c,R0d",a[i][5],i);  
34            }  
35        }  
36    }  
37}
```

The desktop taskbar shows various icons, and the system tray indicates the date and time as 14-09-2022 14:29 and 15-09-2022 08:59. Weather information for 85°F and mostly cloudy is also visible.

```
C:\Users\srija\OneDrive\Desktop\cd5.exe
Implementation of RECURSIVE DESCENT PARSER
Unti
1 Enter the Expression:
2 a
3
4 The string is rejected. 2
```

The screenshot shows a laptop screen with a Dev-C++ 5.11 interface. On the left, the code editor displays `cd3.cpp` with the following content:

```
1 #include<stdio.h>
2 #include<conio.h>
3 #include<string.h>
4 int isterm(char x)
5 {
6     if((x=='a')||(x=='+')||(x=='*')||(x=='(')|| (x==')')|| (x=='$'))
7         return 1;
8     else
9         return 0;
10 }
11 int main()
12 {
13     char table[5][6][4]={{ {"TA","","","TA","",""}, {"",""+TA","","","e","e"}, {"FB","","","FB","",""}, {"","e","+FB","","e","e"}, {"a","","","(E","","")}};
14     char stack[20],input[20];
15     int len,l,i,j,k,nt,t,flag;
16
17     printf("Enter the input string to be parsed : ");
18     scanf("%s",input);
19     l=strlen(input);
20     input[l]='\0';
21     stack[0]='\$';
22     stack[1]='E';
23     stack[2]='\0';
24     stack[3]='\0';
25     stack[4]='\0';
26     stack[5]='\0';
27     stack[6]='\0';
28     stack[7]='\0';
29     stack[8]='\0';
30     stack[9]='\0';
31     stack[10]='\0';
32     stack[11]='\0';
33 }
```

The right window shows the terminal output of the program:

STACK	INPUT	OUTPUT
\$E	a\$	
\$AT	a\$	TA

Process exited after 1.653 seconds with return value 0  
Press any key to continue . . .

The laptop's taskbar at the bottom shows various icons and the date/time: 14:25, 12-09-2022.

cd 2.cpp [Executing] - Dev-C++ 5.11

File Search View Project Execute Tools AStyle Window Help

(globals)

cd 2.cpp

```
1 #include<stdio.h>
2 #include<string.h>
3 #include<conio.h>
4 #include<stdlib.h>
5 using namespace std;
6
7 char ip_sym[15],stack[15];
8 int ip_ptr=0,st_ptr=0,len,i;
10
11 char temp[2],temp2[2];
12
13 char act[15];
14
15 void check();
16
17 int main()
18 {
19     printf("\n\t\t SHIFT REDUCE PARSER\n");
20
21     printf("\n GRAMMER\n");
22
23     printf("\n E->E+E\n E->E/E");
24
25     printf("\n E->E*E\n E->a/b");
26
27     printf("\n enter the input symbol:\t");
28
29     gets(ip_sym);
30
31     printf("\n\t stack implementation table");
32
33     printf("\n\t stack \t\t input symbol\t\t action");
34
35 }
```

SHIFT REDUCE PARSER

GRAMMER

```
E->E+E
E->E/E
E->E*E
E->a/b
enter the input symbol: id+id
```

stack	input symbol	action
\$	id+id\$	--
\$i	d+id\$	shifti
\$id	+id\$	shiftd
\$id+	id\$	shift+
\$id+i	d\$	shifti
\$id+id	\$	shiftd

```
Process exited after 9.509 seconds with return value 0
Press any key to continue . . .
```

Cols: 1 Sel: 0 Lines: 183 Length: 2233 Insert Done parsing in 0.015 seconds

175 1412 12-09-2022

hp

The image shows a laptop screen displaying the Dev-C++ IDE and a terminal window. The IDE window on the left shows the code for 'cd3.cpp'. The terminal window on the right shows the execution results.

**cd3.cpp**

```
1 #include<stdio.h>
2 #include<conio.h>
3 #include<string.h>
4 int isterm(char x)
5 {
6     if((x=='a')||(x=='+')||(x=='*')||(x=='(')|| (x==')')|| (x=='$')) Process exited after 1.653 seconds with return value 0
7     return 1;
8     else
9         return 0;
10 }
11 int main()
12 {
13     char table[5][6][4]={{ "TA", "", "", "TA", "", "" },
14     {"", "+TA", "", "", "e", "e"}, Process exited after 1.653 seconds with return value 0
15     {"FB", "", "", "FB", "", ""}, Press any key to continue . . .
16     {"", "e", "+FB", "", "e", "e"}, Press any key to continue . . .
17     {"a", "", "", "(E)", "", ""}}; Press any key to continue . . .
18     char stack[20],input[20];
19     int len,l,i,j,k,nt,t,flag;
20
21     printf("Enter the input string to be parsed : ");
22     scanf("%s",input);
23     l=strlen(input);
24     input[l]='\0';
25     stack[0]='\0';
26     stack[1]='\0';
27     stack[2]='\0';
28     stack[3]='\0';
29     stack[4]='\0';
30     stack[5]='\0';
31     stack[6]='\0';
32     stack[7]='\0';
33 }
```

**Stack**    **INPUT**    **OUTPUT**

STACK	INPUT	OUTPUT
\$E	a\$	
\$AT	a\$	TA

Process exited after 1.653 seconds with return value 0  
Press any key to continue . . .

Line: 62 Col: 14 Sek: 0 Lines: 109 Length: 2106 Insert Done parsing in 0 seconds

24°C Partly sunny

hp