NAME: SUBASRI

REG NO : 230701346

EX 6 APPLICATION OF STACK

(Evaluating Arithmetic Expression)

#include <stdio.h>

#include <string.h>

#define MAX 20

int Stack[MAX], top = -1;

char expr[MAX];

void Push(int ele);

int Pop();

int main()

{

int i, a, b, c, e;

printf("Enter the postfix expression : ");

gets(expr);

for(i = 0; i<strlen(expr); i++)

{

if(expr[i]=='+'||expr[i]=='-'||expr[i]=='\*'||expr[i]=='/')

{

b = Pop();

a = Pop();

switch(expr[i])

{

case '+':

c = a + b;

Push(c);

break;

case '-':

c = a - b;

Push(c);

break;

case '\*':

c = a \* b;

Push(c);

break;

case '/':

c = a / b;

Push(c);

break;

}

}

else

{

printf("Enter the value of %c : ", expr[i]);

scanf("%d", &e);

Push(e);

}

}

printf("The result is %d", Pop());

return 0;

}

void Push(int ele)

{

top = top + 1;

Stack[top] = ele;

}

int Pop()

{

int e;

e = Stack[top];

top = top - 1;

return e;

}