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1BM21CS254

EVALUATION OF POSTFIX EXPRESSION

INPUT

```
#include<stdio.h>
#include<math.h>
int value[20],stack[20],top=-1;
char postfix[20];

void push(int val){
   top++;
   stack[top]=val;
};

int pop(){
   int val;
   val=stack[top];
   top--;
   return val;
};

int evaluate(){
   int i=0;
```

```
char ch;
while(postfix[i]!='\0'){
   ch=postfix[i];
   if(isalpha(ch)){
      push(value[i]);
   }
   else{
      int op1,op2;
      op1=pop();
      op2=pop();
      switch(ch){
         case('+'):
            push(op1+op2);
            break;
         case('-'):
            push(op1-op2);
            break;
         case('*'):
            push(op1*op2);
            break;
         case('/'):
            push(op1/op2);
            break;
         case('^'):
```

```
                push(pow(op1,op2));
                break;
            }
        }
        i++;
    }
    int result=pop();
    return(result);
}
int main(){
    printf("enter the postfix expression\n");
    scanf("%s",postfix);
    int i=0;
    int result;
    while(postfix[i]!='\0'){
        if(isalpha(postfix[i])){
            printf("enter the value of operand\n");
            scanf("%d",&value[i]);
        }
        i++;
    }
    result=evaluate();
    printf("result=%d",result);
    return 0;
```

}

OUTPUT

```
enter the postfix expression
ABC*+
enter the value of operand
1
enter the value of operand
2
enter the value of operand
3
result=7
Process returned 0 (0x0)   execution time : 8.254 s
Press any key to continue.
```