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1BM21CS249

EVALUATION OF POSTFIX

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
Press any key to continue.
```