

// Write a program to evaluate a given postfix expression using stacks.

```
#include<stdio.h>
```

```
int stack[20];
```

```
int top = -1;
```

```
void push(int x)
```

```
{
```

```
    stack[++top] = x;
```

```
}
```

```
int pop()
```

```
{
```

```
    return stack[top--];
```

```
}
```

```
int main()
```

```
{
```

```
    char exp[20];
```

```
    char *e;
```

```
    int n1,n2,n3,num;
```

```
    printf("Enter the expression :: ");
```

```
    scanf("%s",exp);
```

```
    e = exp;
```

```
    while(*e != '\0')
```

```
{
```

```
    if(isdigit(*e))
```

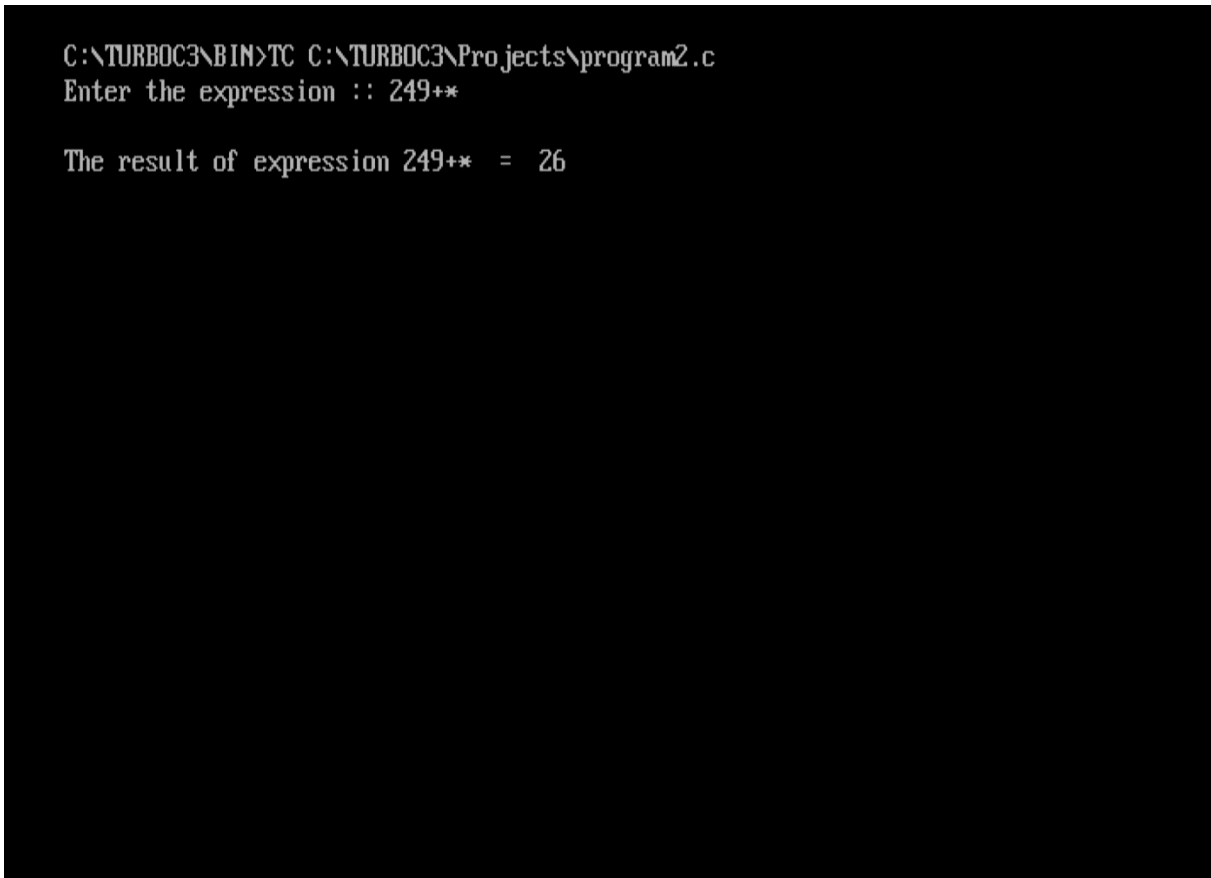
```
{
```

```
        num = *e - 48;
```

```
    push(num);  
}  
else  
{  
    n1 = pop();  
    n2 = pop();  
    switch(*e)  
    {  
    case '+':  
    {  
        n3 = n1 + n2;  
        break;  
    }  
    case '-':  
    {  
        n3 = n2 - n1;  
        break;  
    }  
    case '*':  
    {  
        n3 = n1 * n2;  
        break;  
    }  
    case '/':  
    {  
        n3 = n2 / n1;
```

```
        break;
    }
}
push(n3);
}
e++;
}
printf("\nThe result of expression %s = %d\n\n",exp,pop());
return 0;
}
```

Output:



```
C:\TURBOC3\BIN>TC C:\TURBOC3\Projects\program2.c
Enter the expression :: 249+*

The result of expression 249+* = 26
```