

```
#include <stdio.h>
#include <ctype.h>
#define SIZE 25

struct Stack {
    int top;
    int arr[SIZE];
};

void push(struct Stack *s, int ss);
int pop(struct Stack *s);
void display(struct Stack *s);

void main()
{
    struct Stack s;
    s.top = 0;
    char aa[SIZE];
    printf("Enter postfix: ");
    scanf("%s", &aa);
    int length = strlen(aa);
    int dc = 0;
    for(int i = 0; i<length; i++){
        if (isdigit(aa[i])){
            dc++;
        }
    }
    if (length-dc != dc-1){
```

```
    printf("ERROR");

    return;
}

for(int i = 0; i<length;i++){

    if (isdigit(aa[i])){
        push(&s, aa[i] - '0');

    } else {

        if (s.top < 1){

            printf("ERROR");

            return;

        }

        int t1 = pop(&s);

        int t2 = pop(&s);

        if (aa[i] == '+'){

            push(&s, (t1+t2));

        } else if (aa[i] == '-'){

            push(&s, (t2-t1));

        } else if (aa[i] == '*'){

            push(&s, (t2*t1));

        } else if (aa[i] == '/'){

            push(&s, (t2/t1));

        }

    }

    printf("Result = %d", pop(&s));

}

/***/
```

Adds elements to the top of the stack

/***/

```
void push(struct Stack *s, int ss)
```

```
{
```

```
// Checks if the stack is full
```

```
if (s->top < SIZE)
```

```
{
```

```
    s->arr[s->top] = ss;
```

```
    s->top++;
```

```
}
```

```
else
```

```
{
```

```
    printf("STACK IS FULL\n");
```

```
}
```

```
}
```

/***

Remove the last element from the stack

/***/

```
int pop(struct Stack *s)
```

```
{
```

```
//Checks if the stack is not empty
```

```
if (s->top > 0)
```

```
{
```

```
    return s->arr[s->top--];
```

```
}
```

```
else
```

```
{
```

```
    printf("NO ELEMENTS IN STACK\n");

}

}

/***
Prints all the elements in the stack

***/

void display(struct Stack *s)

{
// Checks if the stack is empty

if (s-> top == 0)

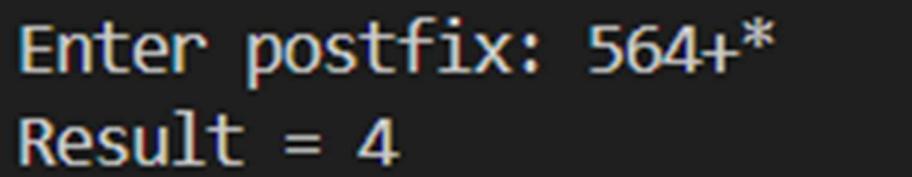
{
    printf("NO ELEMENTS IN STACK\n");

    return;
}

for (int j = 0; j<s->top; j++)

{
    printf("%d, ", s->arr[j]);

}
printf("\n");
}
```



Enter postfix: 564+*

Result = 4

A screenshot of a terminal window. The text "Enter postfix: 564+*" is displayed in blue, indicating it's a user input. Below it, the text "Result = 4" is displayed in red, indicating the program's output.