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8º Aula prática

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## 1.Código fonte:

```
#include <stdio.h>

#include <stdlib.h>

#include <string.h>

#include "stack.h"

const int MAX=5000;

Stack pilha;

int main(){

    char expressao[MAX];

    gets(expressao);

    int i;

    char *aux,*dat;

    stack_init(&pilha,free);

    while(1){

        for(i=0;i<strlen(expressao);i++){

            if (expressao[i]=='('){

                stack_push(&pilha,&expressao[i]);

            }

            if (expressao[i]==')'){

                if (pilha.head==NULL){

                    stack_push(&pilha,&expressao[i]);

                }

                else

                    stack_pop(&pilha,(void*)&dat);

            }

        }

    }
```

```

if(pilha.size==0){

    printf("Balanceada");

}else{

    if(*(aux = stack_peek(&pilha))==('{'){

        printf("Falta fecha parenteses\n");

    }

    if(*(aux = stack_peek(&pilha))==')'){

        printf("Falta abre parenteses\n");

    }

}

return 0;

}

}

```

2.Print do funcionamento:

```

<a+h)*c+((2+3)*2)
Balanceada
Process returned 0 (0x0)   execution time : 19.898 s
Press any key to continue.

```

```

<(a+h)*c
Falta fecha parenteses
Process returned 0 (0x0)   execution time : 22.992 s
Press any key to continue.

```

```

<a+h)*c)
Falta abre parenteses
Process returned 0 (0x0)   execution time : 18.389 s
Press any key to continue.

```

```

a+b
Balanceada
Process returned 0 (0x0)   execution time : 7.622 s
Press any key to continue.

```

```

<<<(a)>>>
Balanceada
Process returned 0 (0x0)   execution time : 4.242 s
Press any key to continue.

```