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EX 5 APPLICATION OF STACK
(Infix to post fix)


```c
#include <stdio.h>
#include <string.h>
#define MAX 20
int Stack[MAX], top = -1;
char expr[MAX], post[MAX];
void Push(char sym);
char Pop();
char Top();
int Priority(char sym);
int main()
{
int i;
printf("Enter the infix expression : ");
gets(expr);
for(i = 0; i < strlen(expr); i++)
 {
 if(expr[i] >= 'a' && expr[i] <= 'z')
 printf("%c", expr[i]);
 else if(expr[i] == '(')
 Push(expr[i]);
 else if(expr[i] == ')')
 {
 while(Top() != '(')
 printf("%c", Pop());
 Pop();
 }
 else
 {
 while(Priority(expr[i])<=Priority(Top()) && top!=-1)
 printf("%c", Pop());
 Push(expr[i]);
 }
 }
for(i = top; i >= 0; i--)
 printf("%c", Pop());
return 0;
}
void Push(char sym)
```

```c
{
 top = top + 1;
 Stack[top] = sym;
}
char Pop()
{
char e;
 e = Stack[top];
 top = top - 1;
return e;
}
char Top()
{
return Stack[top];;
}
int Priority(char sym)
{
int p = 0;
switch(sym)
 {
 case '(':
 p = 0;
 break;
 case '+':
 case '-':
 p = 1;
 break;
 case '*':
 case '/':
 case '%':
 p = 2;
 break;
 case '^':
 p = 3;
 break;
 }
return p;
}
```