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EX NO: 05

PROGRAM NAME: INFIX TO POSTFIX CONVERSION

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CODE:

#include <stdio.h>

#include<string.h>

int top=0;int prevpr;char s[5];char output[100];int j=0;

int prior(op)

{

  if(op=='+' || op=='-')return 1;if(op=='*' || op=='/')return 2;if(op=='(')return 0;if(op=='^') return 4;

}

void push(char op)

{

  top=top+1;

  s[top]=op;

  prevpr=prior(op);

}

void pop()

{

  if(s[top]!='('){

  output[j]=s[top];

```c
        j++;
        }
        top=top-1;
        prevpr=prior(s[top]);
        if(top==0)
          prevpr=0;


}
void arrange(char op)
{ int pr;
  if(op!=')'){
   pr=prior(op);
    if((top==0 || pr>prevpr || op=='(')|| op=='^')
      push(op);
    else if(pr<=prevpr)
    {
      while(pr<=prevpr){
        pop();
      }
      push(op);
    }
  }
  else if(op==')')
  {
```

```c
        while(s[top]!='(')
        {
            pop();
        }
        pop();
    }
}
int main() {
    char str[100];
    scanf("%s",str);
    for(int i=0;i<strlen(str);i++)
    {
        if(str[i]>='a' && str[i]<='z'){
            output[j]=str[i];
            j++;}
        else if(str[i]=='*' || str[i]=='/' || str[i]=='-' || str[i]=='+' || str[i]=='(' ||
str[i]==')' || str[i]=='^')
        {
            arrange(str[i]);
        }
    }
    while(top!=0)
        pop();
    printf("%s",output);
```

}

OUTPUT:

a*b+(c/d-g)/h^i^(l+m-n*o)

ab*cd/g-hilm+no*-^^/+

Process returned 0 (0x0)   execution time : 35.757 s

Press any key to continue.