

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

```
#include<ctype.h>
```

```
char Stack[25]; //Operator stack
```

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

```
void push(char ele)
```

```
{
```

```
    Stack[++top] = ele;
```

```
}
```

```
char pop()
```

```
{
```

```
    if(top== -1)
```

```
        return -1;
```

```
    else
```

```
        return(Stack [top--]);
```

```
}
```

```
int stack_priority(char x)
```

```
{
```

```
    if(x== '#')
```

```
        return -1;
```

```
    if(x== '(')
```

```
        return 0;
```

```
    if(x== '+' || x== '-')
```

```
        return 2;
```

```
    if(x== '*' || x== '/' || x== '%')
```

```
        return 4;
```

```
    if(x== '^')
```

```
        return 5;
```

```
}
```

```
int sym_priority(char x)
```

```
{
```

```
    if(x=='(')
```

```
        return 9;
```

```
    if(x=='+' || x=='-')
```

```
        return 1;
```

```
    if(x=='*' || x=='/' || x=='%')
```

```
        return 3;
```

```
    if(x=='^')
```

```
        return 6;
```

```
}
```

```
void main()
```

```
{
```

```
    char Infix[20],sym,x;
```

```
    int i;
```

```
    printf("\n\n\t\tEnter the Valid Infix Expression: ");
```

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

```
    i=0;
```

```
    push('#');
```

```
    printf("\n The postfix expression is :");
```

```
    while(Infix[i] != '\0')
```

```
{
```

```
        sym=Infix[i];
```

```
        if(isalnum(sym))
```

```
            printf("%c",Infix[i]);
```

```
        else if(sym=='(')
```

```
            push(sym);
```

```
else if(sym=='(')
{
    while((x=pop()) != '(')
        printf("%c",x);
}
else
{
    while((stack_priority(Stack[top]))>=sym_priority(sym))
        printf("%c",pop());
    push(sym);
}
i++;
} //end of while

while(top != 0)
    printf("%c",pop());
}
```