

```
#include<stdio.h>

#include<conio.h>

#include<string.h>

#define MAX 20

char stack[MAX];

int top=-1;

char pop();

void push(char item);

int prcd(char symbol)

{

switch(symbol)

{

case '+':

case '-':return 2;

break;

case '*':

case '/':return 4;

break;

case '^':

return 6;
```

```
break;
```

```
case '(':
```

```
case ')':
```

```
case '#':return 1;
```

```
}
```

```
}
```

```
int isoperator(char symbol)
```

```
{
```

```
switch(symbol)
```

```
{
```

```
case '+':
```

```
case '-':
```

```
case '*':
```

```
case '/':
```

```
case '^':
```

```
case ',':
```

```
case '(':
```

```
case ')':return 1;
```

```
break;
```

```

default:return 0;

}

}

void convertip(char infix[],char postfix[])

{

int i,symbol,j=0;

stack[++top]='#';

for(i=0;i<strlen(infix);i++)

{

symbol=infix[i];

if(isoperator(symbol)==0)

{

postfix[j]=symbol;

j++;

}

else{

if(symbol=='(')push(symbol);

else if(symbol==')')

{

while(stack[top]!='(')

```

```
{
    postfix[j]=pop();
    j++;
}

pop();//pop out (.

}

else{

if(prcd(symbol)>prcd(stack[top]))

push(symbol);

else{

while(prcd(symbol)<=prcd(stack[top]))

{

postfix[j]=pop();

j++;

}

push(symbol);

}

}

}

}
```

```
while(stack[top]!='#')
{
    postfix[j]=pop();
    j++;
}

postfix[j]='\0';//null terminate string.
}

int main()
{
    char infix[20],postfix[20];
    printf("Enter the valid infix string:\n");
    gets(infix);
    convertip(infix,postfix);
    printf("The corresponding postfix string is:\n");
    puts(postfix);
    return 0;
}

void push(char item)
{
    top++;
```

```
stack[top]=item;
```

```
}
```

```
char pop()
```

```
{
```

```
char a;
```

```
a=stack[top];
```

```
top--;
```

```
return a;
```

```
}
```