

WEEK 2: INFIX TO POSTFIX CONVERSION

PROGRAM

```
#include<stdio.h>

#include<stdlib.h>

#include<conio.h>

int F(char symbol)
{
    switch(symbol)
    { case '+' :
      Case '-' : return 2;
      case '*' :
      case '/' : return 4;
      case '^' :
      case '$' : return 5;
      case '(' : return 0;
      case '#' : return -1;
      default : return 8;
    } }

int G(char symbol)
{
    switch(symbol)
    {
      case '+' :
      case '-' : return 1;
      case '*' :
      case '/' : return 3;
      case '^' :
      case '$' : return 6;
      case '(' : return 9;
      case ')' : return 0;
```

```

default : return 7;

} }

void infix_postfix(char infix[])
{
    int top,j,i;
    char s[30],postfix[30];
    char symbol;
    top=-1;
    s[++top]='#';
    j=0;
    for(i=0;i<G(symbol))
    {
        postfix[j]=s[top--];
        j++;
    }
    if(F(s[top])!=G(symbol))
    {
        s[++top]=symbol;
    }
    else top--;
}
while(s[top]!='#')
{
    postfix[j++]=s[top--];
}
postfix[j]='\0';
printf("The postfix expression is\n");
puts(postfix);
}

int main()
{

```

```
char exp[30];  
  
printf("Enter an expression:\n");  
  
gets(exp);  
  
infix_postfix(exp);  
  
return 0;  
  
}
```

OUTPUT:

