WEEK-02

CONVERSION OF INFIX EXPRESSION TO POSTFIX

#include<stdio.h>

#include<conio.h>

#include<string.h>

int index=0,pos=0,top=-1,length;

char symbol,temp,infix[20],postfix[20],stack[20];

void infix\_postfix();

void push(char);

char pop();

int pred(char symbol);

void main()

{

printf("Enter infix expression");

scanf("%s",infix);

infix\_postfix();

printf("Infix expression=%s",infix);

printf("Postfix expression=%s",postfix);

getch();

}

void infix\_postfix()

{

length=strlen(infix);

push('#');

while(index<length)

{

symbol=infix[index];

switch(symbol)

{

case '(':push(symbol);

break;

case')':temp=pop();

while(temp!='(')

{

postfix[pos]=temp;

pos++;

temp=pop();

}

break;

case '+':

case '-':

case '\*':

case '/':

case '^':while(pred(stack[top])>=pred(symbol))

{

temp=pop();

postfix[pos++]=temp;

}

push(symbol);

break;

default:postfix[pos++]=symbol;

}

index++;

}

while(top>0)

{

temp=pop();

postfix[pos++]=temp;

}

}

void push(char symbol)

{

top=top+1;

stack[top]=symbol;

}

char pop()

{

char symb;

symb=stack[top];

top=top-1;

return(symb);

}

int(pred(char symbol))

{

int p;

switch(symbol)

{

case '^':p=3;

break;

case '\*':

case '/':p=2;

break;

case '+':

case '-':p=1;

break;

case '(':p=0;

break;

case '#':p=-1;

break;

}

return(p);

}

OUTPUT:

