**YASH GUPTA**

**1BM21CS251**

**Q: Convert infix to postfix expression.**

**Input: -**

#include<stdio.h>

#include<math.h>

char infix[20],postfix[20],stack[20],symbol,temp; int top=-1,pos=0,index=0,length;

void push(char symbol){ top++; stack[top]=symbol;

}

char pop(){

char temp=stack[top--]; return temp;

}

int pred(char symbol){ int p; switch(symbol){ case('^'):

p=2;

break; case('\*'):

case('/'): p=1;

break; case('+'):

case('-'): p=0;

break; case('('): p=-1;

break; case('#'): p=-2;

break;

}

return p;

}

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; 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; break;

}

index++;

}

while(top>0){ temp=pop(); postfix[pos++]=temp;

}

}

int main(){

printf("enter the infix expression\n"); scanf("%s",infix);

infix\_postfix();

printf("the infix expression is: %s\n",infix); printf("the postfix expression is: %s\n",postfix); return 0;

}

**Output: -**



