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Lab2 :

```
# include <stdio.h>
# include <stdlib.h>
# define MAX 100
char st[MAX];
int top=-1;
void push (char c)
{
        if (top== MAX-1)
        printf("stack full\n");
        else
        {  top++;
           st[top) =c ;
        }
}
char pop ()
{           char ele;
            if (top ==-1)
            printf("stack empty\n");
            else
        {       ele = st[top];
                top--;
                return ele;
        }
}
int stackempty()
{           if (top==-1)
            return 1;
            else
            return 0;
}
```

```
char stacktop()
{
        if (top == -1)
          printf ("\n stackempty!");
        else
          return st[top];
}
int priority (char op)
{
        switch (op)
      {
            case '+':
            case '-': return 1;
            case '*':
            case '/': return 2;
            case '^': return 3;
             default : return 0;
      }
}
void main ()
{
        char infix[50], item; int i;
        printf ("Enter infix expression : ");
        scanf ("%s", infix);
        printf ("\n Postfix : ");
        i=0;
        while (infix[i] != '\0')
      {    switch (infix[i])
           {
                case '(' : push (infix[i]); break;
                case ')' : while ((item=pop())!='(')
                               printf ("%c", item); break;
        case '+':
        case '-':
        case '*':
        case '/':
        case '^':   while (!stackempty() && priority (infix[i
                                          <= priority (stacktop(
                 {        item = pop();
                          printf ("%c", item);
                  }
                  push (infix[i]); break;
      ~~case~~ default :  printf ("%c", infix[i]);
                      break;
      }
      i++;
  }
  while  (!stackempty())
  {     char item;
         item = pop();
        printf ("%c", item);
  }
}
```