Lab 2 Week 2 28/01/24

1 infix to postfix

```
#include <stdio.h>
#include <ctype.h>

#define SIZE 50

char stack[SIZE];
 int top=-1;

push(char a)
 {
    stack[++top]=a ;
 }
 char pop()
 {
     return(stack(top--]);
 }
 int pr(char symbol)
 {
      if(symbol=='^')
      {
           return(3);
      }
       else if (symbol=='*' || symbol=='/')
        {
             return(2);
        }
          else if(symbol=='+' ||symbol=='-')
          {
              return(1);
          }
          else {
               redurn(0);
}         }
```

```
void main()
{
    char infix[50], postfix[50], char. a;
    int i=0, k=0;
    printf("Enter Infix Expression: "];
    Scanf("%s", infix);
    push('#');
    while((ch=infix[i++])!='\0')
     {
        if(ch=='(') push(ch);
        else
            if(isalnum(ch)) postfix[k++]=ch;
            else
                if(ch==')')
                {
                    while(stack[top] !='(')
                        postfix[k++]=pop();
                    a=pop();
                }
                else
                {
                    while(pr(stack[top])>=pr(ch))
                        postfix[k++]=pop();
                    push(ch);
                }
     }
    while(stack[top]!='#')
          postfix[k++]=pop();
    postfix[k]='\0';
    printf("\n postifix Epression=%s\n",
            postfix);
}
```

output

```
Enter the expression :
        12+18/27*16+8.

        12 18 27 /16 * + 8 +
```