

28/12/23

WEEK-2

classmate

Date _____

Page _____

1) WAP to convert infix to postfix expression.

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

```
char stack[100];
int top = -1;
```

```
void push(char x)
{
    stack[++top] = x;
}
```

```
char pop()
{
    if (top == -1)
        return -1;
    else
        return stack[top--];
}
```

```
int priority(char x)
{
    if (x == '(')
        return 0;
```



```

    if (x == '+' || x == '-')
        return 1;
    if (x == '*' || x == '/')
        return 2;
    return 0;
}

int main()
{
    char exp[100];
    char *e, x;
    printf("Enter the expression:");
    scanf("%s", exp);
    printf("\n");
    e = exp;

    while (*e != "\0")
    {
        if (isalnum(*e))
            printf("%c", *e);
        else if (*e == '(')
            push(*e);
        else if (*e == ')')
        {
            while ((x = pop()) != '(')
                printf("%c", x);
        }
    }
}

```



```

    }
    else
    {
        while (priority(stack[top]) >= priority(*e))
            printf("%c", pop());
        push(*e);
    }
    e++;
}
while (top != -1)
{
    printf("%c", pop());
}
return 0;
}

```

Output:-

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

ALP
13/1/24

12 18 27 / 16 * + 8 +