

prefix_postfix.c

```
1 #include <stdio.h>
2
3 int main(void) {
4     int a = 5, b;
5
6     // Postfix: value of a is used first (5), then a becomes 6
7     b = a++;
8     // after this: a == 6, b == 5
9     printf("After b = a++ -> a = %d, b = %d\n", a, b);
10
11    a = 5; // reset
12    // Prefix: a becomes 6 first, then value 6 is assigned to b
13    b = ++a;
14    // after this: a == 6, b == 6
15    printf("After b = ++a -> a = %d, b = %d\n", a, b);
16
17    // Postfix in an expression
18    a = 3;
19    printf("Using postfix in expression: a = %d, (a++ + 2) = %d, now a = %d\n",
20           a, a++ + 2, a);
21    // Evaluation: (a++ + 2) uses a's old value 3 -> 3+2 = 5; after expression a
22    // becomes 4
23
24    // Prefix in an expression
25    a = 3;
26    printf("Using prefix in expression: a = %d, (++a + 2) = %d, now a = %d\n",
27           a, ++a + 2, a);
28    // (++a + 2) increments a to 4 then 4+2 = 6
29
30    return 0;
31}
32
33 ****
34 * Output:
35 ****
36 After b = a++ -> a = 6, b = 5
37 After b = ++a -> a = 6, b = 6
38 Using postfix in expression: a = 3, (a++ + 2) = 5, now a = 4
39 Using prefix in expression: a = 3, (++a + 2) = 6, now a = 4
40 ****/
41
```