

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
    becomes 4
22
23     // Prefix in an expression
24     a = 3;
25     printf("Using prefix in expression: a = %d, (++a + 2) = %d, now a = %d\n",
26           a, ++a + 2, a);
27     // (++a + 2) increments a to 4 then 4+2 = 6
28
29     return 0;
30 }
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
```