

Aim:

Illustrate the use of static variables

The **static** variables are used within function/ file as local static variables.

They can also be used as a global variable

Static local variable is a local variable that retains and stores its value between function calls or block and remains visible only to the function or block in which it is defined.

Static global variables are global variables visible only to the file in which it is declared.

Static variable has a default initial value zero and is initialized only once in its lifetime.

Follow the instructions given in the comment lines to declare and initialize the static variables and understand the working of static variables.

Source Code:

static.c

```
#include <stdio.h>
void next(void);
static int counter=5;// Declare a global static variable 'counter' with an initial value of 5.
void main() {
    while(counter<10) {
        next();
        counter++;
    }
    return 0;
}
void next( void ) {
    static int iteration=10;// Declare a static integer variable 'iteration' with an initial value 10
    iteration ++;
    printf("iteration=%d and counter= %d\n", iteration, counter);
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
iteration=11 and counter= 5
iteration=12 and counter= 6
iteration=13 and counter= 7
iteration=14 and counter= 8
iteration=15 and counter= 9