

Q.4 Declare a static local variable inside a function. Observe how its value persists across function calls.

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

```
void demofunction() {  
    static int count = 0;
```

```
    count ++;
```

```
    printf("count = %d\n", count);
```

```
}
```

```
int main() {
```

```
    printf("calling demofunction multiple times : \n");
```

```
    demofunction();
```

```
    demofunction();
```

```
    demofunction();
```

```
    demofunction();
```

```
    return 0;
```

```
}
```

main.c



Run

Output

```
1 #include <stdio.h>
2
3 void demo_function() {
4     // 'static' keyword ensures 'count' is initialized only on the
      first call
5     // and its value is preserved across all subsequent calls.
6     static int count = 0;
7
8     // Increment the persistent count
9     count = count + 1;
10
11     // Print the current value of the persistent count
12     printf("Count = %d\n", count);
13 }
14
15 int main() {
16     printf("Calling demo_function multiple times:\n\n");
17
18     // Call the function multiple times to observe the persistent
      count
19     demo_function();
20     demo_function();
21     demo_function();
22     demo_function();
23
24     return 0;
--
```

Calling demo\_function multiple times:

Count = 1

Count = 2

Count = 3

Count = 4

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=== Code Execution Successful ===

