

Suggest a Topic

Write an Article

Login



Some interesting facts about static member functions in C++

1) static member functions do not have **this** pointer.

For example following program fails in compilation with error “*this’ is unavailable for static member functions*”

```
#include<iostream>
class Test {
    static Test * fun() {
        return this; // compiler error
    }
};

int main()
{
    getchar();
    return 0;
}
```

Run on IDE

2) A static member function cannot be virtual (See [this](#) G-Fact)

3) Member function declarations with the same name and the name parameter-type-list cannot be overloaded if any of them is a static member function declaration.

For example, following program fails in compilation with error “*void Test::fun()’ and `static void Test::fun()’ cannot be overloaded*”

```
#include<iostream>
class Test {
    static void fun() {}
    void fun() {} // compiler error
};

int main()
{
    getchar();
    return 0;
}
```



```
}
```

[Run on IDE](#)

4) A static member function can not be declared *const*, *volatile*, or *const volatile*.

For example, following program fails in compilation with error “static member function ‘static void Test::fun()’ cannot have ‘const’ method qualifier ”

```
#include<iostream>
class Test {
    static void fun() const { // compiler error
        return;
    }
};

int main()
{
    getchar();
    return 0;
}
```

[Run on IDE](#)

Please write comments if you find anything incorrect, or you want to share more information about the topic discussed above.

References:

<http://www.open-std.org/jtc1/sc22/wg21/docs/papers/2005/n1905.pdf>

Article Tags : C++ C++-Static Keyword Static Keyword

Practice Tags : CPP



Be the First to upvote.



2.7

☐ To-do ☐ Done

Based on **36** vote(s)

Feedback

Add Notes

Improve Article

Please write to us at contribute@geeksforgeeks.org to report any issue with the above content.

Writing code in comment? Please use ide.geeksforgeeks.org, generate link and share the link here.

Load Comments

Share this post!

GeeksforGeeks
A computer science portal for geeks

710-B, Advant Navis Business Park,
Sector-142, Noida, Uttar Pradesh - 201305
feedback@geeksforgeeks.org

COMPANY

About Us
Careers
Privacy Policy
Contact Us

PRACTICE

Company-wise
Topic-wise
Contests
Subjective Questions

LEARN

Algorithms
Data Structures
Languages
CS Subjects
Video Tutorials

CONTRIBUTE

Write an Article
Write Interview Experience
Internships
Videos

@geeksforgeeks, Some rights reserved

