

Inline functions

A function that is expanded in line when it is called. When the inline function is called whole code of the inline function gets inserted or substituted at the point of inline function call. This substitution is performed by the C++ compiler at compile time.

```
inline return-type function-name(parameters)
{
    // function code
}
```

Not to use inline function ..

- If a function contains a loop. (for, while, do-while).
- If a function contains static variables.
- If a function is recursive.
- If a function contains switch or goto statement.

Pros

- 1) Speed up the program by avoiding function call overhead.
- 2) Saves execution time.
- 3) It also saves the overhead of push/pop variables on the stack when function is called.
- 4) It also saves overhead of a return call from a function.

Cons

- Increase executable size of program due to code expansion.
- Inline code is resolved at compile time. So if any changes made to the code of the inlined function, program needs to be compiled again.