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Inline Functions, Default Arguments & Constant Arguments in C++

#### Inline Functions in C++

Inline functions are used to reduce the function call. When one function is being called multiply times in the program it increases the execution time, so inline function is used to reduce time and increase program efficiency. If the inline function is being used when the function is called, the inline function expands the whole function code at the point of a function call, instead of running the function. Inline functions are considered to be used when the function is small otherwise it will not perform well. Inline is not recommended when static variables are being used in the function.

inline int product(int a, int b){

return a\*b;

}

**Code:**

#include <iostream>

using namespace std;

inline int product (int a, int b)   //inline keyword will skip the calls and execute it rapidly

{

    return a\*b;

}

int main()

{   int n1,n2;

    cout<<"Enter a number n1: ";

    cin>>n1;

    cout<<"ENter a number n2: ";

    cin>>n2;

    cout<<"The product is: "<<product(n1,n2)<<endl;

    cout<<"The product is: "<<product(n1,n2)<<endl;

    cout<<"The product is: "<<product(n1,n2)<<endl;

    cout<<"The product is: "<<product(n1,n2)<<endl;

    cout<<"The product is: "<<product(n1,n2)<<endl;

    cout<<"The product is: "<<product(n1,n2)<<endl;

    return 0;

}

Output:

Enter a number n1: 2

ENter a number n2: 2

The product is: 4

The product is: 4

The product is: 4

The product is: 4

The product is: 4

The product is: 4

#### Default Arguments in C++

Default arguments are those values which are used by the function if we don’t input our value. It is recommended to write default arguments after the other arguments.

#### Constant Arguments in C++

Constant arguments are used when you don’t want your values to be changed or modified by the function.

//Constant arguments

#include <iostream>

using namespace std;

 int product (int a, int b=3)   //inline keyword will skip the calls and execute it rapidly

{

    return a\*b;

}

int main()

{   int n1;

    cout<<"Enter a number n1: ";

    cin>>n1;

    // cout<<"ENter a number n2: ";

    // cin>>n2;

    cout<<"The product is: "<<product(n1)<<endl;

    return 0;

}

**Output:**

Enter a number n1: 2

The product is: 6