

```
#include <bits/stdc++.h>
using namespace std;
#define pi 3.14
```

```
int main()
```

```
{
    int r = 10;
    int area = pi * r * r;
    cout << area;
}
```

```
#include <iostream.h>
```

```
using namespace std;
```

```
typedef pair<int, int> pr
```

```
int main()
```

```
{
    pr p;
    p.first = 10;
}
```

Tertiary operators

```
int c = (a > b) ? a : b;
```

↑
if this condⁿ
is true then
'a' is assigned
to c

↑
b is assigned
to c if condⁿ
fals.

Inline functions

```
#include <iostream.h>
```

```
using namespace std;
```

```
inline int max(int a, int b)
```

```
{ return (a > b) ? a : b; }
```

```
}
```

```
int main() {
```

```
    int a, b;
```

```
    cin >> a >> b;
```

```
    int c = max(a, b);
```

```
    int x, y;
```

```
    x = 12;
```

```
    y = 34;
```

```
    int z = max(x, y);
```

```
}
```

The content inside the function is copied where the fⁿ is called in the main prog. All the parameters are taken care of.

Advantages - Code becomes a bit fast.

Disadvantages - The output file becomes bulky and large.

Why every funⁿ can't be inline?

As compiler only allows those fⁿ to be inline which are called 2-3 times in the prog.

Default arguments

```
#include <iostream>
using namespace std;
```

```
int sum(int a[], int size, int si = 0)
```

```
{
    int ans = 0;
```

```
    for(int i = si; i < size; i++)
```

```
    {
        ans += a[i];
```

```
    }
    return ans;
```

```
}
```

```
int main()
```

```
{
    int a[20];
```

```
    cout << sum(a, 20) << endl;
```

```
}
```

→ This is called default argument.
This parameter is handled if user does not give the 'last' parameter.

→ here user has not passed the 'si' hence default argument places the value of si as 0

Note

Default arguments can only be placed from right hand side and not anywhere from middle.

```
int sum(int a[], (int size = 10) int si) X
```

```
int sum(int a[], int size = 10, (int si = 10), int si) X
```