

If statement

Doing things conditionally



if clause

```
int number1 {55};  
int number2 {60};  
  
bool result = (number1 < number2); // Expression yielding the condition  
std::cout << std::boolalpha << "result : " << result << std::endl;  
  
std::cout << std::endl;  
std::cout << "free standing if statement" << std::endl;  
  
//if(result){  
if(result == true){  
    std::cout << number1 << " is less than " << number2 << std::endl;  
}  
  
//if(!result){  
if(!(result == true)){  
    std::cout << number1 << " is NOT less than " << number2 << std::endl;  
}
```

else clause

```
//Using else
std::cout << std::endl;
std::cout << "using the else clause : " << std::endl;

if(result == true){
    std::cout << number1 << " is less than " << number2 << std::endl;
}else{
    std::cout << number1 << " is NOT less than " << number2 << std::endl;
}
```


if clause

```
int number1 {55};
int number2 {60};

bool result = (number1 < number2); // Expression yielding the condition
std::cout << std::boolalpha << "result : " << result << std::endl;

std::cout << std::endl;
std::cout << "free standing if statement" << std::endl;

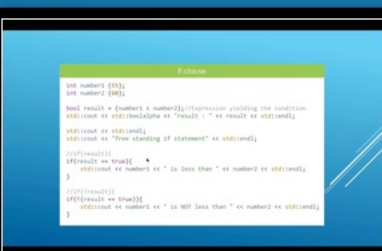
//if(result){
if(result == true){
    std::cout << number1 << " is less than " << number2 << std::endl;
}

//if(!result){
if(!(result == true)){
    std::cout << number1 << " is NOT less than " << number2 << std::endl;
}
```

expression as condition

```
//Use expression as condition directly
std::cout << std::endl;
std::cout << "Using expression as condition : " << std::endl;

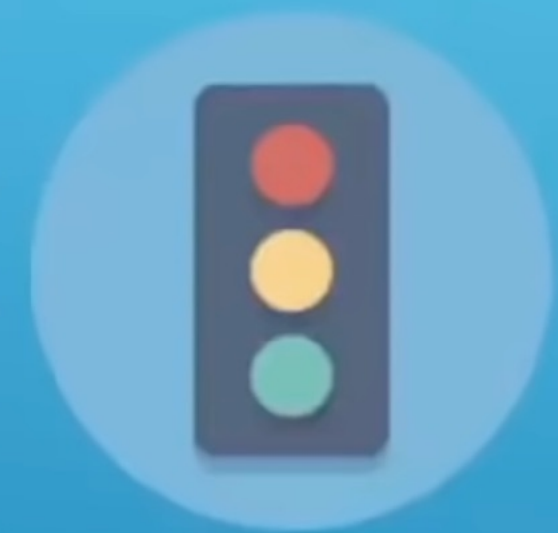
if(number1 < number2){
    std::cout << number1 << " is less than " << number2 << std::endl;
}else{
    std::cout << number1 << " is NOT less than " << number2 << std::endl;
}
```



```
bool red = false;
bool green {true};
bool yellow {false};
bool police_stop{true};

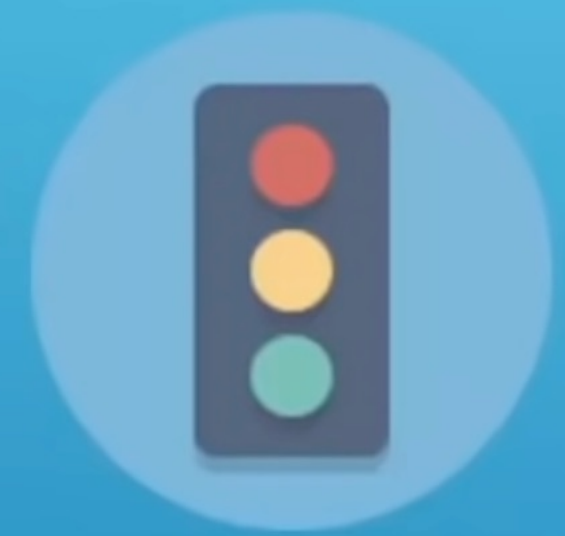
/*
 *      If green : go
 *      If red, yellow : stop
 *      If green and police_stop : stop
 * */

if(red){
    std::cout << "Stop" << std::endl;
}
if(yellow){
    std::cout << "Slow down" << std::endl;
}
if(green){
    std::cout << "Go" << std::endl;
}
```



Nested conditions

```
std::cout << std::endl;
std::cout << "Police officer stops(verbose)" << std::endl;
if(green){
    if(police_stop){
        std::cout << "Stop" << std::endl;
    }
    else{
        std::cout << "Go" << std::endl;
    }
}
```



Nesting alternative

```
std::cout << std::endl;
std::cout << "Police officer stops(less verbose)" << std::endl;
if(green && !police_stop){
    std::cout << "Go" << std::endl;
}else{
    std::cout << "Stop" << std::endl;
}
```

