

Allocation && Deallocation



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```
#include <iostream>

using namespace std;

class MyClass{
    int id;
    string name;
};
```

```
int main(){
    // p1 might be nullptr; *p1 is
    // not initialized properly
    MyClass* p1 = static_cast<MyClass*>
        (malloc(sizeof(MyClass)));

    // *p2 is default initialized
    auto p2 = new MyClass;

    // *p3 is default initialized
    // (if allocation succeeds)
    auto p3 = new(nothrow) MyClass;

    // possible error: cannot delete
    // object allocated by malloc()
    delete p1;

    // possible error: cannot free()
    // object allocated by new
    free(p2);
}
```

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