

```
#include <iostream>
#include <memory>
#include <string>

using namespace std;

class Student {
private:
    int id;
    string first;
    string last;

public:
    Student(int id, const string& first, const string& last) :
        id(id), first(first), last(last) {}

    Student() :
        id{}, first({}), last({}) {}

    int getId() {
        return id;
    }

    const string& getFirst() const {
        return first;
    }

    const string& getLast() const {
        return last;
    }
};

class StudentDeleter {
public:
    void operator()(Student* s) const {
        cout << "StudentDeleter: deleting " << s->getFirst()
            << " " << s->getLast() << "\n";
        delete s;
    }
};

int main() {
    unique_ptr<Student> s1(new Student(1, "John", "Smith"));
    unique_ptr<Student> s2 = make_unique<Student>(2, "Mike", "Richards");
    unique_ptr<Student> s3 = make_unique<Student>();

    StudentDeleter d;
    Student* james = new Student(3, "James", "Slocum");

    unique_ptr<Student, StudentDeleter> j (james, d);

    unique_ptr<Student> n = nullptr;
}
```