Modern C++ Libraries
Smart Pointers

Kenny Kerr
@kennykerr
http://kennykerr.ca

pluralsight
hardcore developer training

The Pointer Landscape

- **T** *** // be careful!**

- **unique_ptr**
- **shared_ptr**
- **weak_ptr**

- **auto_ptr** // don't use me!

- **ComPtr**
- **The Essentials of COM – Part 1 & 2**
- **http://pluralsight.com/Courses/com-essentials**

unique_ptr

- **Exclusively owns object to which it points**

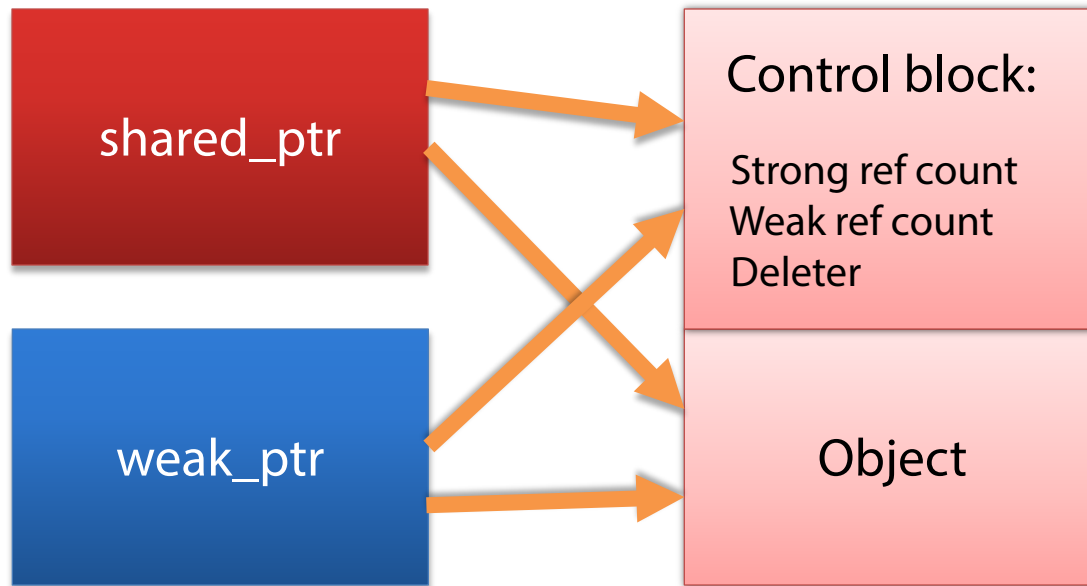- **Can't be copied**

- **Can be moved**

- **make_unique**

Demo: unique_ptr

shared_ptr

- Shares ownership of object to which it points

- Non-invasive reference counting

- Can be copied

- Can be moved

- make_shared

Demo: shared_ptr

weak_ptr

Demo: weak_ptr

Summary

- **unique_ptr**

- **shared_ptr**

- **weak_ptr**

- **ComPtr**

- **The Essentials of COM – Part 1 & 2**

- **http://pluralsight.com/Courses/com-essentials**