

# The Slicing Problem

CS240 Computer Science II

## Some relationship between base and derived classes: data members

- Derived class inherits data members of its base class (or classes in the case of multiple inheritance). Therefore, a derived class object contains data members of its base class.
- The reverse is not true, i.e., the base class object does not contain additional data members defined in the derived class.

# Example

- Based class *point* contains int data members *x* and *y*, its derived class *circle* defined an additional int data member *radius*.
- Then  
point *p*; // object *p* contains *x* and *y*  
circle *c*; // object *c* contains *x*, *y*, and *radius*
- Obviously, *c* is a “larger” object for it contains an additional data member.