

CSCI261 E/F

Lecture 23: Operator Overloading
November 15, 2010

$$2 + 2 = 4$$

What is +?
What does it mean?

Person + Person = ?

- What, a siamese twin?
- A tumultuous relationship?
- Absorbed together to create a Giant?

How do you “Add” Objects?

It's entirely up to you!

```
// you could define a function called add()

Person add(const Person& a, const Person& b) {
    int height = a.getHeight() + b.getHeight();
    int weight = a.getWeight() + b.getWeight();
    Person new_person(height, width);
    return new_person;
}
```

Operator Overloading

int + int = int

Operator Overloading

```
Person x;  
Person y;  
Person my_new_bud = x + y;
```

So... what does **+** do when applied to Persons?

Operator Overloading

You decide! (and implement)

```
// return a new human with combined height & weight  
  
Person operator + (const Person& lhs, const Person& rhs) {  
    int height = lhs.getHeight() + rhs.getHeight();  
    int weight = lhs.getWeight() + lhs.getWeight();  
    Person new_person(height, width);  
    return new_person;  
}
```

Example

SolidFriendOperator

Homework

- Read 10.1 & 10.2
 - Skip generic programming, templates
- Read p345 -350
- Complete assignment *SolidFriendOperator*