CS 161
Intro to CS I

Begin Structs
Odds and Ends...

• What do you need help with?
• Last week to demo Assignment 5.
• Assignment 6 due Sunday.
Structures

• Data Structures So Far...
  – Variables
  – Arrays

• What if we want mixed types?
  – Record: name, age, weight, etc.
  – Use **struct** type
Struct/Members

struct doc_record {
    char name[50];
    int age;
    float weight;
};

• What does this do?
• How do we use it?
Struct Type

struct doc_record{
    char name[50];
    int age;
    float weight;
}; //creates a user defined type, doc_record

int main() {
    doc_record garrett; //use it as a type
    ...
}

Creating Struct Demo...
Why is it good to have an array of structs?

- What happens if you have two arrays with first names and last names, and you want to sort by first name?
- What happens if you put the first name and last name in a struct?
Demo...
Returning Structs...

```cpp
struct contact_info {
    std::string name;
    std::string address;
    unsigned int phone;
};
...
int main() {
    contact_info address_book[50];
    ...
    address_book[0] = create_contact();
    ...
}
contact_info create_contact() {
    contact_info contact;
    contact.name = “Jennifer”;
    return contact;
}
```
Passing Structs Demo...