## Exceptions, Pointers to Structs, Pointers to Objects

CS 2308 Fall 2011

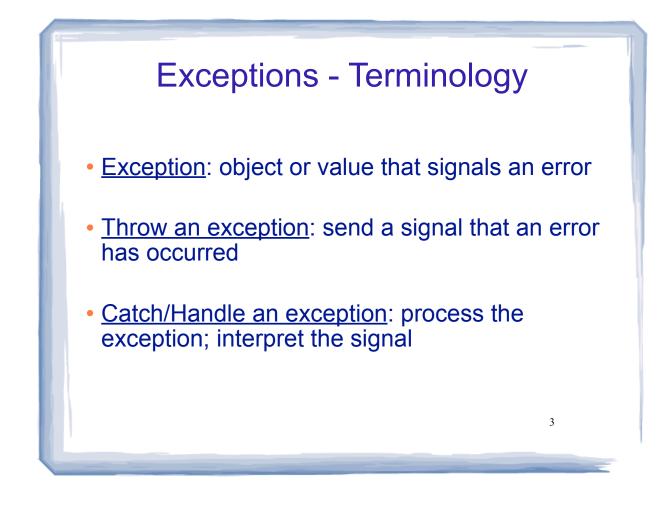
Jill Seaman

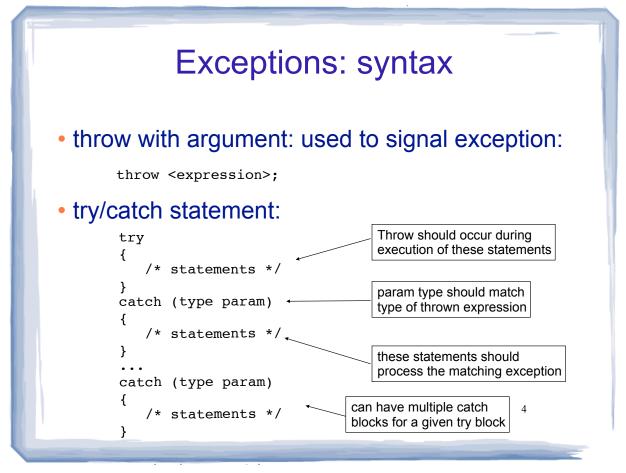
Lecture 15

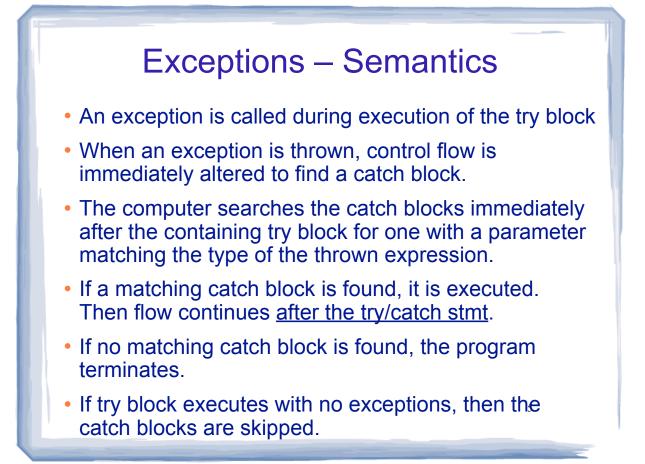
Using content from textbook slides: Starting Out with C++, Gaddis, Pearson/Addison-Wesley

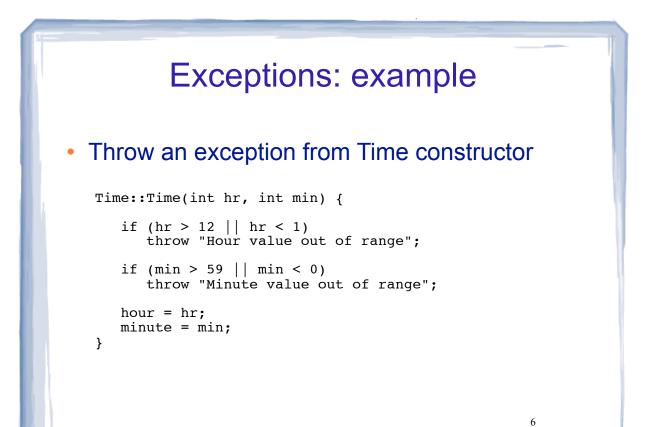


- Indicate that something unexpected has occurred or been detected
- Allow program to deal with the problem in a controlled manner
- Can be as simple or complex as program design requires







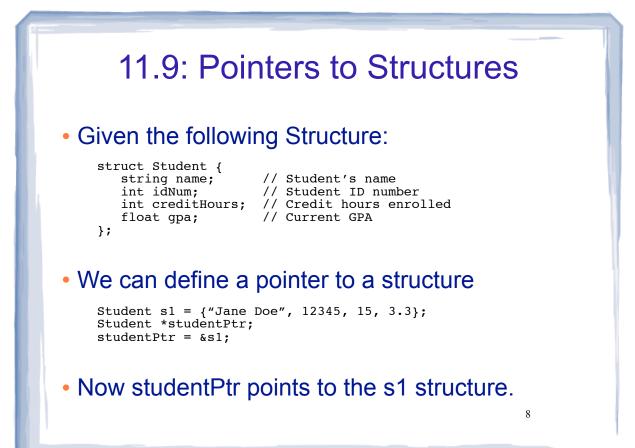


## Exceptions: example

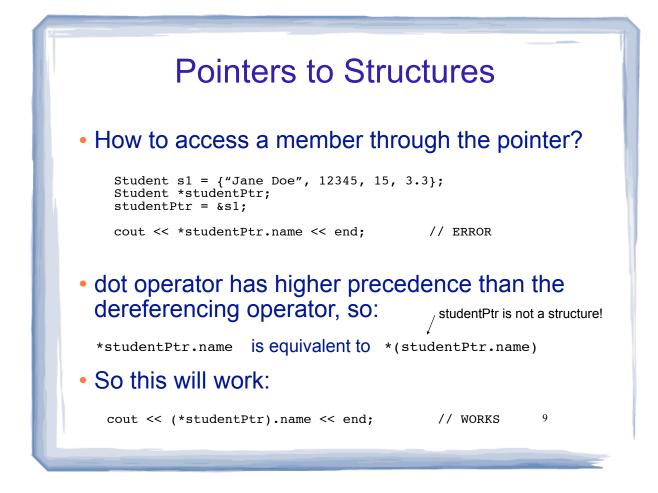
 Main function catches exception from Time constructor:

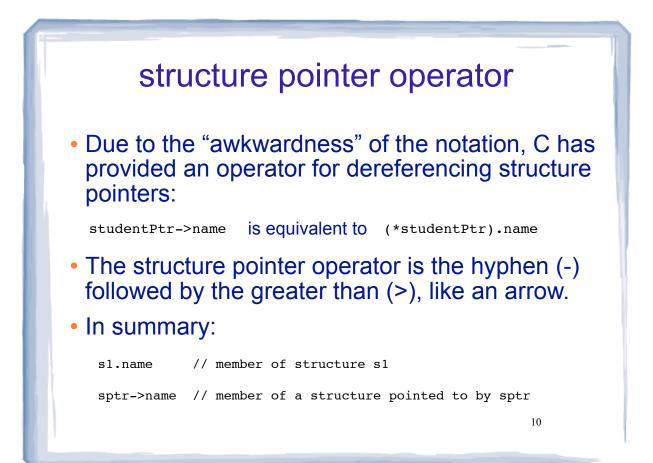
```
int main() {
    try {
        Time time1(13,33);
        cout << time1.display() << endl;
    }
    catch (char *msg) {
        cout << "Exception: " << msg << endl;
    }
    cout << "After the try/catch." << endl;
    return 0;
}
• Output:</pre>
```

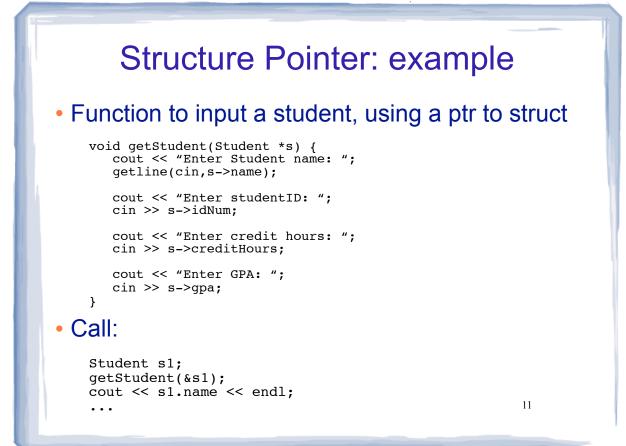
Exception: Hour value out of range After the try/catch.

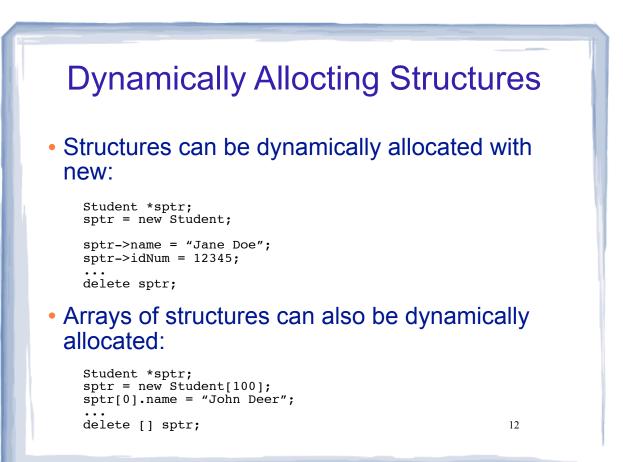


7









## **Structures and Pointers**

## • Expressions:

s->m	s is a structure pointer, m is a member
*a.p	a is a structure, p (a pointer) is a member. This expr is the value pointed to by p: *(a.p)
(*s).m	s is a structure pointer, m is a member. Equivalent to s->m
*s->p	s is a structure pointer, and p (a pointer) is in the structure pointed to by s. Equiv to *(s->p).
*(*s).p	s is a structure pointer, and p (a pointer) is in the structure pointed to by s. Equiv to *(s->p).

