CS11600: Introduction to Computer Programming (C++)

Lecture 17

Svetlozar Nestorov
University of Chicago

Outline

- Error handling mechanisms
- Exceptions
  - try, throw, catch
  - Exception objects

Error Handling

- What to do when an error (not a bug?) occurs.
  - Terminate program.
  - Return error code.
  - Return legal value, set global error code.
  - Call error handling function.
  - Throw an exception.

Exceptions

- An exception causes the function to return immediately without a return value.
- Control is transferred to the first appropriate catch statement.
- Exceptions cannot be ignored!

Exception Structure

```
try {
    throw exception;
} catch (signature) {
    // May occur in a function call.
    // May have multiple catch statements.
}
```

Exception Objects

- Often, an exception is a string (char *).
- In general, any object can be an exception.
- Catch exception objects by reference.