

CS11600: Introduction to Computer Programming (C++)

Lecture 17

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Outline

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

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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.**

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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!

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Exception Structure

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

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Exception Objects

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

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