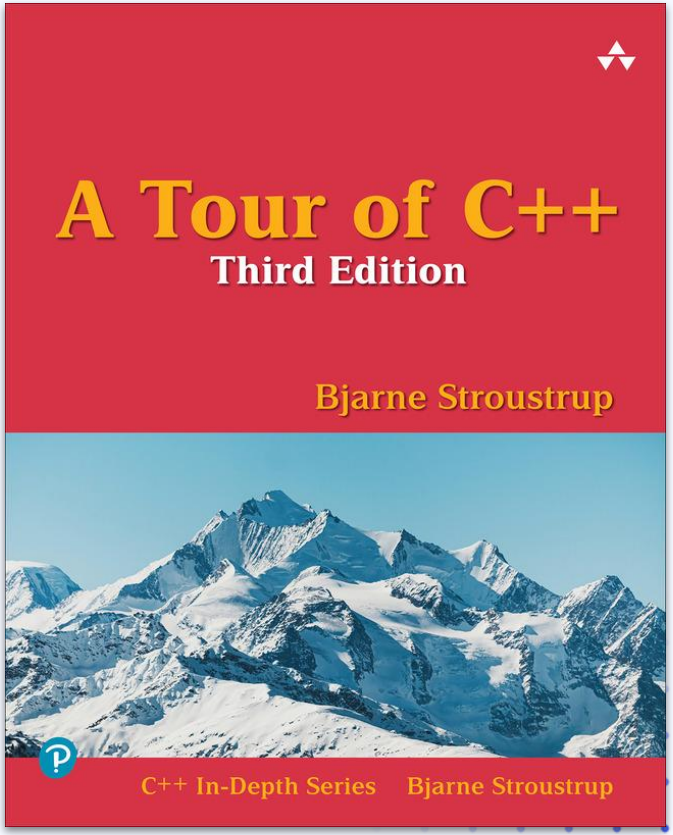
Exceptions and Invariants

CSE 232 - Dr. Josh Nahum

Reading:

Sections 4.1, 4.2, and 4.3



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<stdexcept>

<stdexcept>

logic_error	exception class to indicate violations of logical preconditions or class invariants
invalid_argument	exception class to report invalid arguments
domain_error	exception class to report domain errors
length_error	exception class to report attempts to exceed maximum allowed size
out_of_range	exception class to report arguments outside of expected range
runtime_error	exception class to indicate conditions only detectable at run time
range_error	exception class to report range errors in internal computations
overflow_error	exception class to report arithmetic overflows
underflow_error	exception class to report arithmetic underflows

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what

Example

```
#include <stdexcept>
int Remainder(int num, int denom) {
  if (num < 0) {
    throw std::illegal_argument{"numerator is negative"};
  } else if (denom <= 0) {
    throw std::illegal_argument{"denominator is not positive"};
  }
  return num % denom;
}
```

```
try {
  Remainder(x, 14);
} catch (std::illegal_argument const & e) {
  cout << e.what() << endl;
}
```

Attribution

Please ask questions via Piazza

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