Safe systems programming languages

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Systems programming languages

- Performance
- Explicit memory management
- Control over machine-level data representation
C language

- Low level language
- Type and memory safety
  - Array out-of-bound access
  - Dangling pointers
  - Buffer overflow
High-level type safe languages

- Security with a high price:
  - Performance overhead
  - Memory overhead
  - Type annotations
  - Porting legacy C code
Safe programming

- **Compatibility**
  - CCured
  - SafeC

- **Alternatives**
  - Cyclone
  - Deca
Thank you for your attention!