Object Models

This page is the first stage in a post on programming language object models. It will eventually introduce object models for Rust, C++, C#/Java, and JavaScript. At the moment these topics seem likely to be part of the final post, but new ones will probably be added and some may disappear.

Instance models

- Instance lifetime
- Acquisition and release of resources
 - Memory
 - Child instances
- Ownership
 - Enforced single ownership
 - Multiple ownership
 - Shared mutation
 - Prohibited
 - Optional support
 - default

Program models

- Execution engine
 - Scheduled by OS
 - Event queue (JavaScript) https://javascript.info/
 - Async await
- Safety
 - Enforced unique mutation
 - No pointers
 - Wild wild west
 - Optional control
- Access to platform API
 - Associated libraries
 - Stable binary interface
 - Safety escape hatch
- Program structure
 - Physical structure
 - Static libs
 - Dynamic libs
 - Crates and repositories
 - Execution structure
 - Processes and threads
 - Network of objects
 - No cycles

- o Cycles and self references
- Methods, functions, and lambdas