Introduction to Epos

Epos is a functional, statically typed programming language that compiles to LLVM IR.

Key Features

- **Functional Programming**: Functions are first-class values, immutable by default
- **Static Typing**: Type-safe with generics and type inference
- **Compiled**: Compiles to efficient native code via LLVM

Hello World

Your first Epos program:

```
fn hello(): string
    "Hello World!"
end


print(hello())
```

Comments

Epos supports single-line and nestable multi-line comments:

```
# This is a single-line comment

(#
  This is a multi-line comment
  (#
    And they can be nested!
  #)
#)
```

Basic Syntax Rules

- **Naming**: Currently, case agnostic. You can use camel case, snake case, kabab case, etc.
- **Visibility**: Everything is private by default, use * after a name to make public
- **Immutability**: Variables are immutable

Getting Started

To create, compile and run an Epos program:

```
nix github:epos-lang/epos -- init hello-world
cd hello-world
epos -r hello-world/main.epos
```

Next, learn about variables and types in Epos.