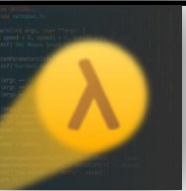




Blame Assignment

Traditionally compilers arbitrarily assign blame - often editing one piece of code results in an error somewhere seemingly unrelated.



Lamdu uses the order in which code is written for to assign type mismatches to newly written code.



“Hello”
typed
first

```
if x == 0: | “Hello,”
else:      | 5
           | Num
           | Text
```

```
if x == 0: | “Hello,”
           | Text
           | Num
else:      | 5
```

5
typed
first

Blame Assignment Across Definitions



Within each definition, Lamdu stores the types of its dependencies. When they change, Lamdu tracks both the new type and the previously used type.

Until accepting the updated type, the old type is used for type inference, preserving coherency.

When updating, local type mismatches may be created.

digits 519

Type was: Num \rightarrow Array Num

Update to: { num Num, \rightarrow Array Num
base Num }

digits 519

base 16

[2, 0, 7]