DSL

Domain Specific Language

```
<person>
    <name>PeyloW</name>
    <age>35</age>
</person>
```

NSXMLParser

```
@interface PEWPerson
@property(copy) NSString *name;
@property(assign) NSInteger age;
@end
```

```
<person>
    <name>PeyloW</name>
    <age>35</age>
</person>
```

if *person* then return a ***PEWPerson*** instance

```
person >> @root : PEWPerson
```

```
@interface PEWPerson
@property(copy) NSString *name;
@property(assign) NSInteger age;
@end
```

```
<person>
    <name>PeyloW</name>
    <age>35</age>
</person>
```

if **name** then assign to **name** property

```
name >> name
```

```
@interface PEWPerson
@property(copy) NSString *name;
@property(assign) NSInteger age;
@end
```

```
<person>
    <name>PeyloW</name>
    <age>35</age>
</person>
```

if *age* then type cast and assign to *age* property

```
age >> age : NSNumber
```

```
@interface PEWPerson
@property(copy) NSString *name;
@property(assign) NSInteger age;
@end
```

```
<person>
    <name>PeyloW</name>
    <age>35</age>
</person>
```

```objc
people = [CWXMLTranslator translateContentsOfURL:url
                          withTranslationNamed:@"PEWPerson"
                                      delegate:nil
                                         error:NULL];
```

```objc
@interface PEWPerson
@property(copy) NSString *name;
@property(assign) NSInteger age;
@end
```

```
<person>
    <name>PeyloW</name>
    <age>35</age>
</person>
```

```
person >> @root : PEWPerson {
    name >> name;
    age >> age : NSNumber;
}
```

```
@interface PEWPerson
@property(copy) NSString *name;
@property(assign) NSInteger age;
@end
```

BNF

Backus-Naur Form

```
translation ::= source ">>" target { ":" transform }

source      ::= XML-SYMBOL

target      ::= "@root" | keypath

keypath     ::= OBJC-SYMBOL

transform   ::= class { "{" translation* "}" }

class       ::= OBJC-SYMBOL
```

Backus-Naur Form

♥

Recursive Descent Parser

```
translation ::= source ">>" target { ":" transform }
source       ::= XML-SYMBOL
```

```objc
- (id)parseTranslation {
    [self takeXMLSymbol];
    [self takeString:@">>"];
    [self parseTarget];
    if ([self tryString:@":"]) {
        [self parseTransform];
    }
}
```

```
target        ::= "@root" | keypath
keypath       ::= OBJC-SYMBOL
```

```objc
- (void)parseTarget {
    if ([self tryString:@"@root"]) {
        [self addRootMarker];
    } else {
        [self takeKeyPathSymbol];
    }
}
```

```
transform   ::= class { "{" translation* "}" }
class       ::= OBJC-SYMBOL
```

```objc
- (void)parseTransform {
    [self takeClassSymbol];
    if ([self tryString:@"{"]) {
        while (![self tryString:@"}"]) {
            [self parseTranslation];
        }
    }
}
```

NSScanner

An unsung hero of Foundation

```
+[NSScanner scannerWithString:]

-[NSScanner scanString:intoString:]

-[NSScanner scanCharactersFromSet:intoString:]

-[NSScanner scanInteger:]
-[NSScanner scanDouble:]
...
```

Demo

https://github.com/PeyloW/CWFoundation

```
[main]
debug = ON

[menu]
color = green
show-help = NO
```

```
ini-file    ::= groups*
group       ::= groupname setting*
groupname   ::= "[" SYMBOL "]" "\n"
setting     ::= SYMBOL "=" TEXT  "\n"
```