





whoami

Tobias



FROGGS

Slangs





sub languages



syntax?



dialect



phonology



phonology



morphology

The background of the image is a vibrant, abstract illustration. It features a central rainbow arching across the frame, composed of several curved bands of color from red to purple. Interspersed along the rainbow and in the surrounding space are numerous stylized elements: large yellow stars of various sizes, some with black outlines; blue and grey hearts; and black, leaf-like shapes that resemble stylized flowers or perhaps cat ears. The overall aesthetic is whimsical and dreamlike, set against a backdrop of dark, mottled colors.

<foo bar baz>.join



morphology



lexic



use Foo;



lexic ✓



syntax

```
say map { -$_ } 0..9
say map { -$_ }, ^10
say (^10).map:-*
say do for ^10 -> $x { -$x }
```



syntax ✓



idiomatic

```
sub foo{ my %opt = @_ }
sub foo( *%opt ) { ... }
<?php ... ?>
```



idiomatic ✓

phonology

morphology

lexic ✓

syntax ✓

idiomatic ✓

I FORGOT HOW



TO SLANG

```
@x=(1,2,3);  
say foo(@x); # „1“  
sub foo($){ shift };  
say foo 1, 2, 3; # „123“  
say foo @x; # „3“
```

```
sub postfix:<!>($n) {  
    [+]\1...$n  
}  
say 3! # „6“
```

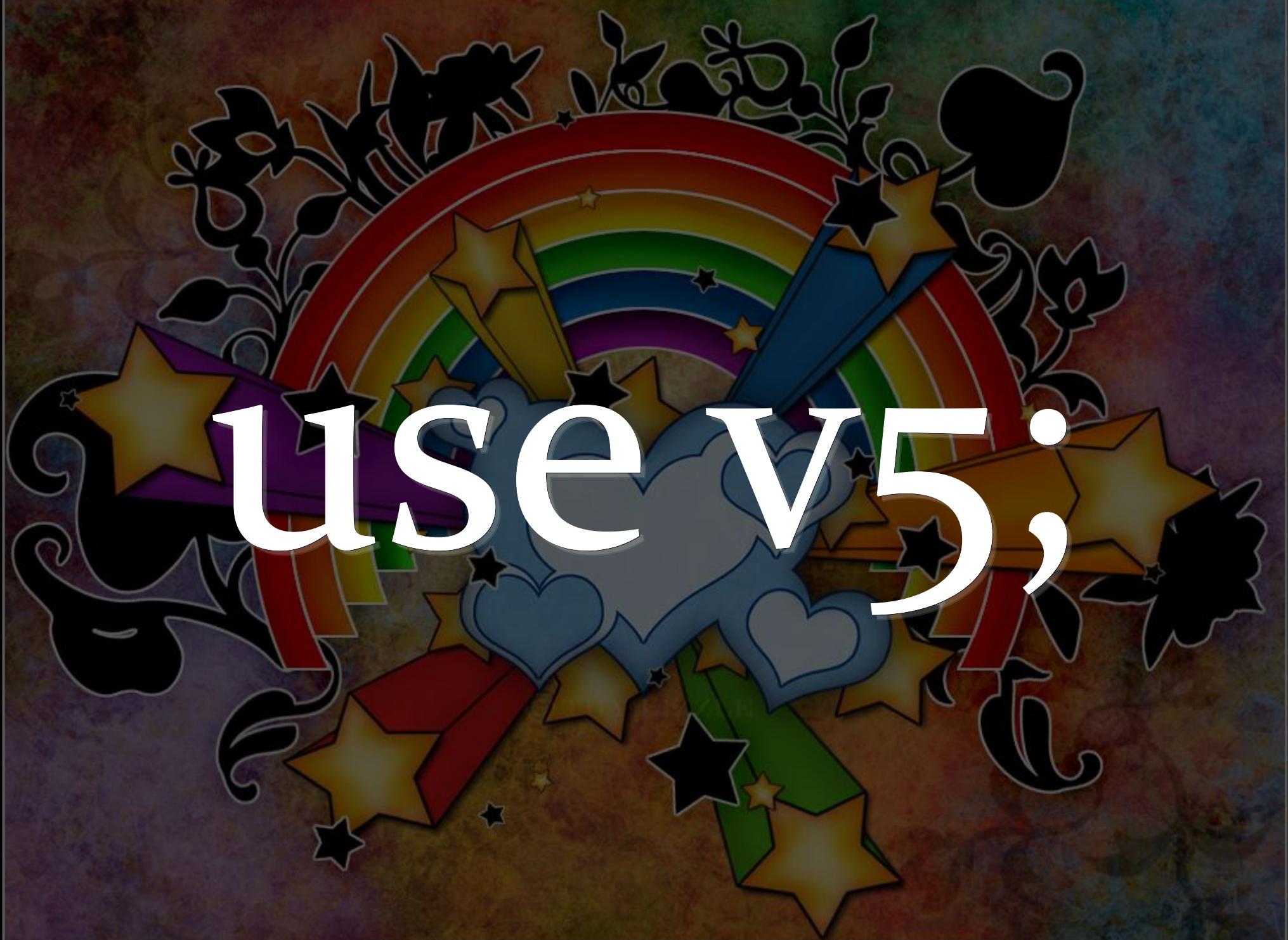
```
use v6;  
$*ERR.say: $*OS;
```

```
{  
    use v5;  
    say STDERR $^O;  
}
```

```
use v6;  
$*ERR.say: $*OS;
```

```
{  
    use v5;  
    say STDERR $^O;  
}
```

use v5,



```
use v5;
sub is_valid {
    shift =~ m=^(((ht|f)tp(s?))\://)?  

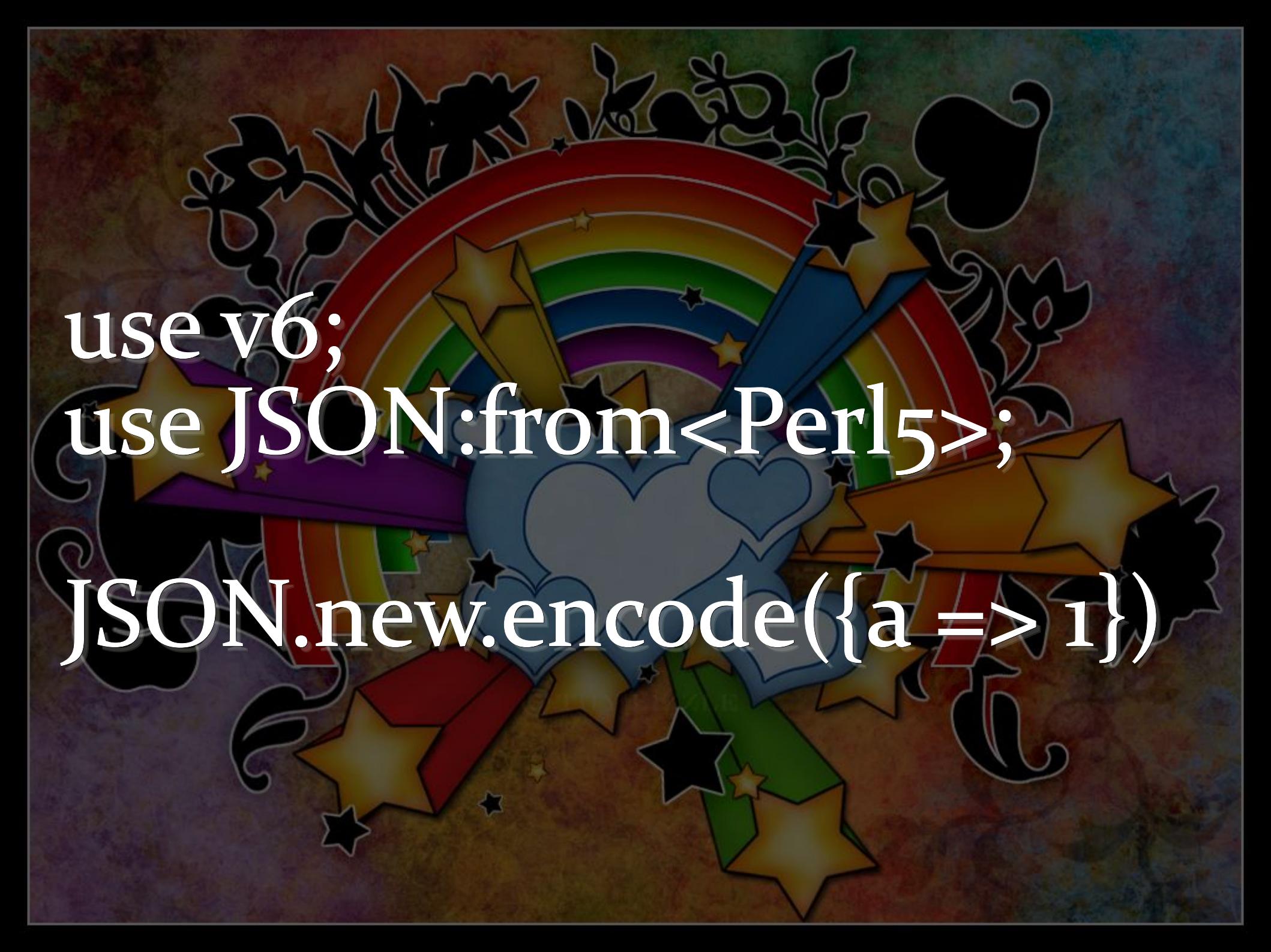
    (www.|[a-zA-Z].)  

    [a-zA-Zo-9\-\.]+\.(com)(\:[o-9]+)*  

    ((\$|[a-zA-Zo-9\.\,\,\;\?\']|\+\&%\%  

    \$#\~_\-]+))*$=i
}
{
    use 6.0.0;
    say ?is_valid( "http://github.com" )
}
```

```
use v6;
sub decode-json( $json_text ) {
    use v5;
    use JSON;
    $json = JSON->new->allow_nonref;
    $json->decode( $json_text );
}
```



```
use v6;  
use JSON::from<Perl5>;  
  
JSON.new.encode({a => 1})
```

```
use v6;
sub decode-json( $json_text ) {
    use v5;
    use JSON;
    $json = JSON->new->allow_nonref;
    $json->decode( $json_text );
}
```

```
use v6;
sub decode-json( $json_text ) {
    use v5;
    use JSON;
    $json = JSON->new->allow_nonref;
    $json->decode( $json_text );
}
```

```
use v6;
sub decode-json( $json_text ) {
    use v5;
    use JSON;
    $json = JSON->new->allow_nonref;
    $json->decode( $json_text );
}
```

```
use v6;
sub decode-json( $json_text ) {
    use v5;
    use JSON;
    $json = JSON->new->allow_nonref;
    $json->decode( $json_text );
}
```

```
token comp_unit {  
    :my $*MAIN := "MAIN";  
}  
token statement_control:sym<use> {  
    :my $OLD_MAIN := ~$*MAIN;  
    <sym> <.ws> [  
        || <version>  
        || <module_name><version>?  
    ]  
    [ <?{ $*MAIN ne $OLD_MAIN }>  
        <statementlist=.LANG($*MAIN,  
            'statementlist')> ]?  
}
```

```
token comp_unit {  
    :my $*MAIN := "MAIN";  
}  
token statement_control:sym<use> {  
    :my $OLD_MAIN := ~$*MAIN;  
    <sym> <.ws> [  
        || <version>  
        || <module_name><version>?  
    ]  
    [ <?{ $*MAIN ne $OLD_MAIN }>  
        <statementlist=.LANG($*MAIN,  
            'statementlist')> ]?  
}
```

```
grammar P5::Grammar {
    token statementlist { <statement>* }
}

class P5::Actions {
    method statementlist($/) {
        for $<statement> { [...] }
    }
}

sub EXPORT(*@a) {
    %*LANG<Perl5> := P5::Grammar;
    %*LANG<Perl5-actions> := P5::Actions;
    $*MAIN := "Perl5";
}
```

```
grammar P5::Grammar {
    token statementlist { <statement>* }
}

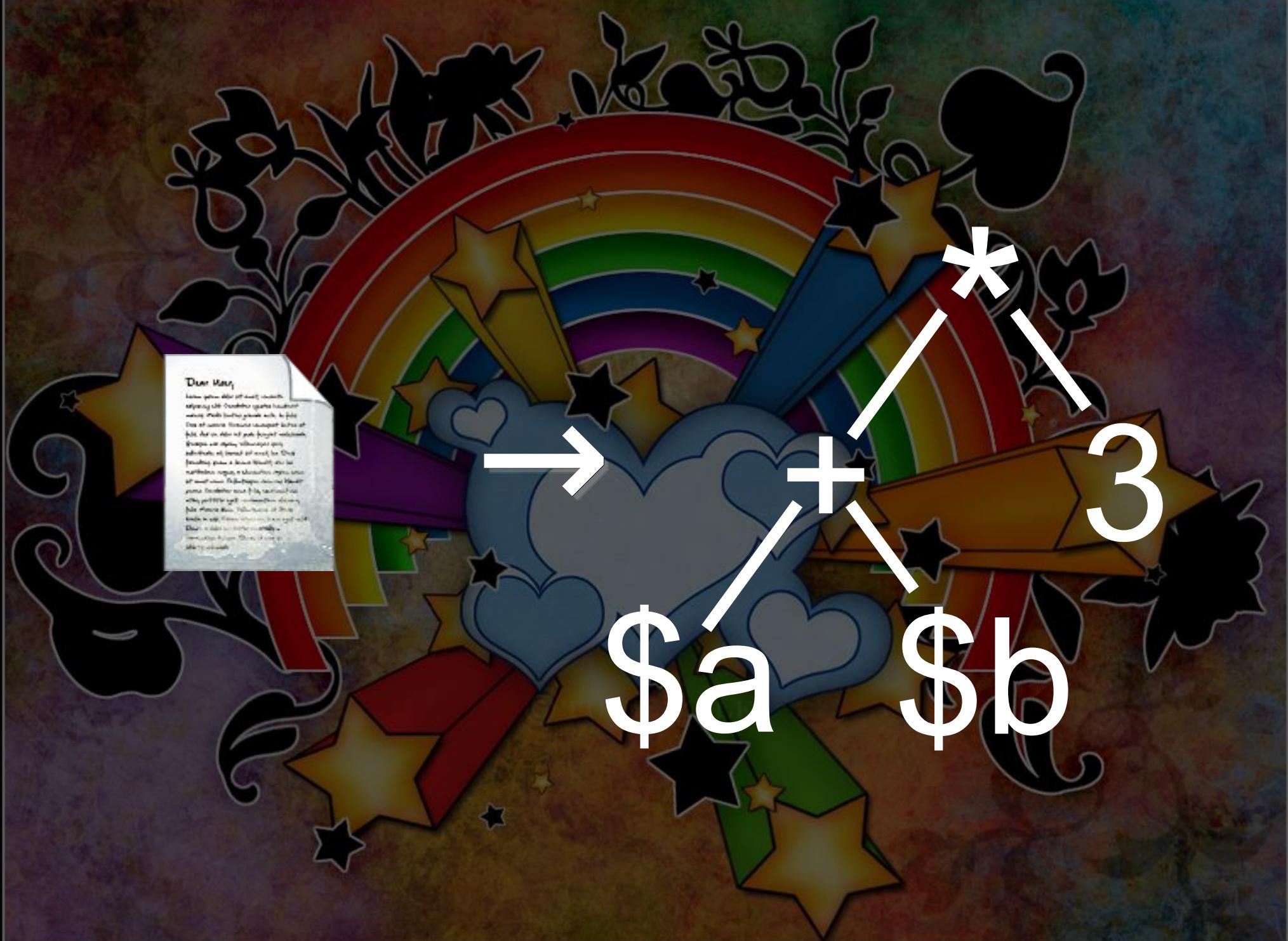
class P5::Actions {
    method statementlist($/) {
        for $<statement> { [...] }
    }
}

sub EXPORT(*@a) {
    %*LANG<Perl5> := P5::Grammar;
    %*LANG<Perl5-actions> := P5::Actions;
    $*MAIN := "Perl5";
}
```

```
use v6;
sub decode-json( $json_text ) {
    use v5;
    use JSON;
    $json = JSON->new->allow_nonref;
    $json->decode( $json_text );
}
```



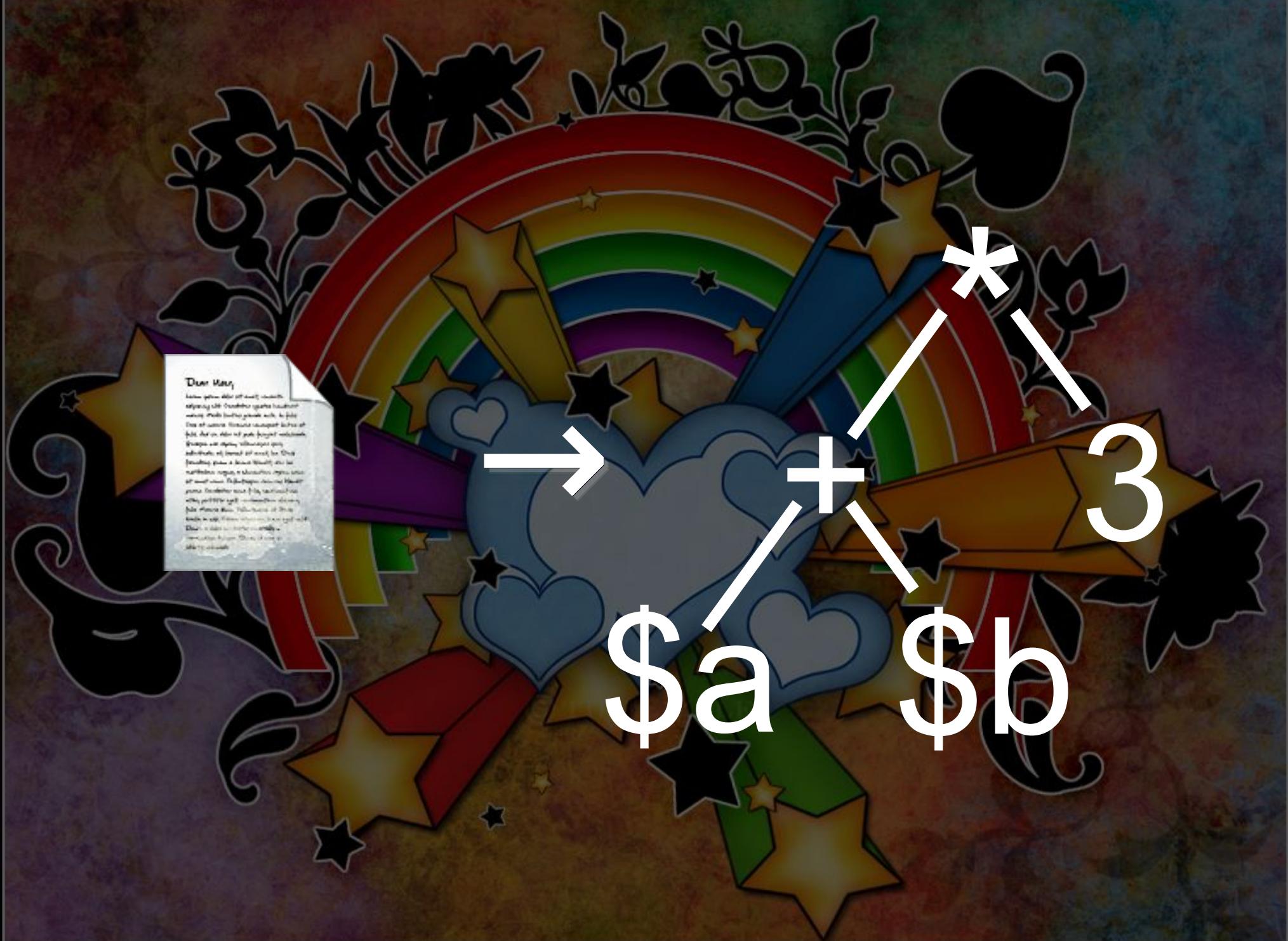
Parser?

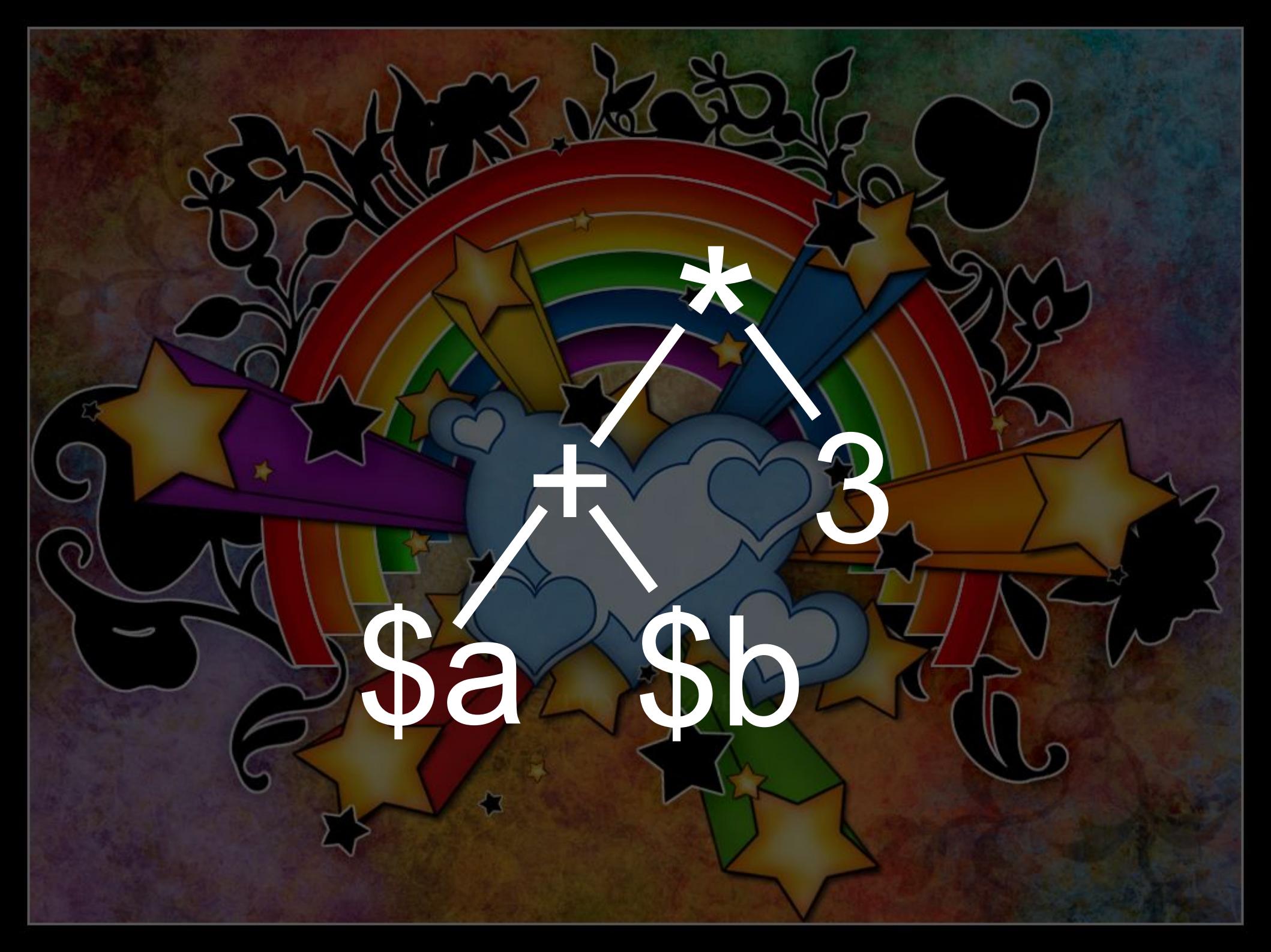


```
grammar P5::Grammar {  
    token statementlist {  
        <statement>*  
    }  
}
```



```
class P5::Actions {  
    method statementlist($/) {  
        for $<statement> { make .ast }  
    }  
}
```





$\$a$ $\$b$

+

*

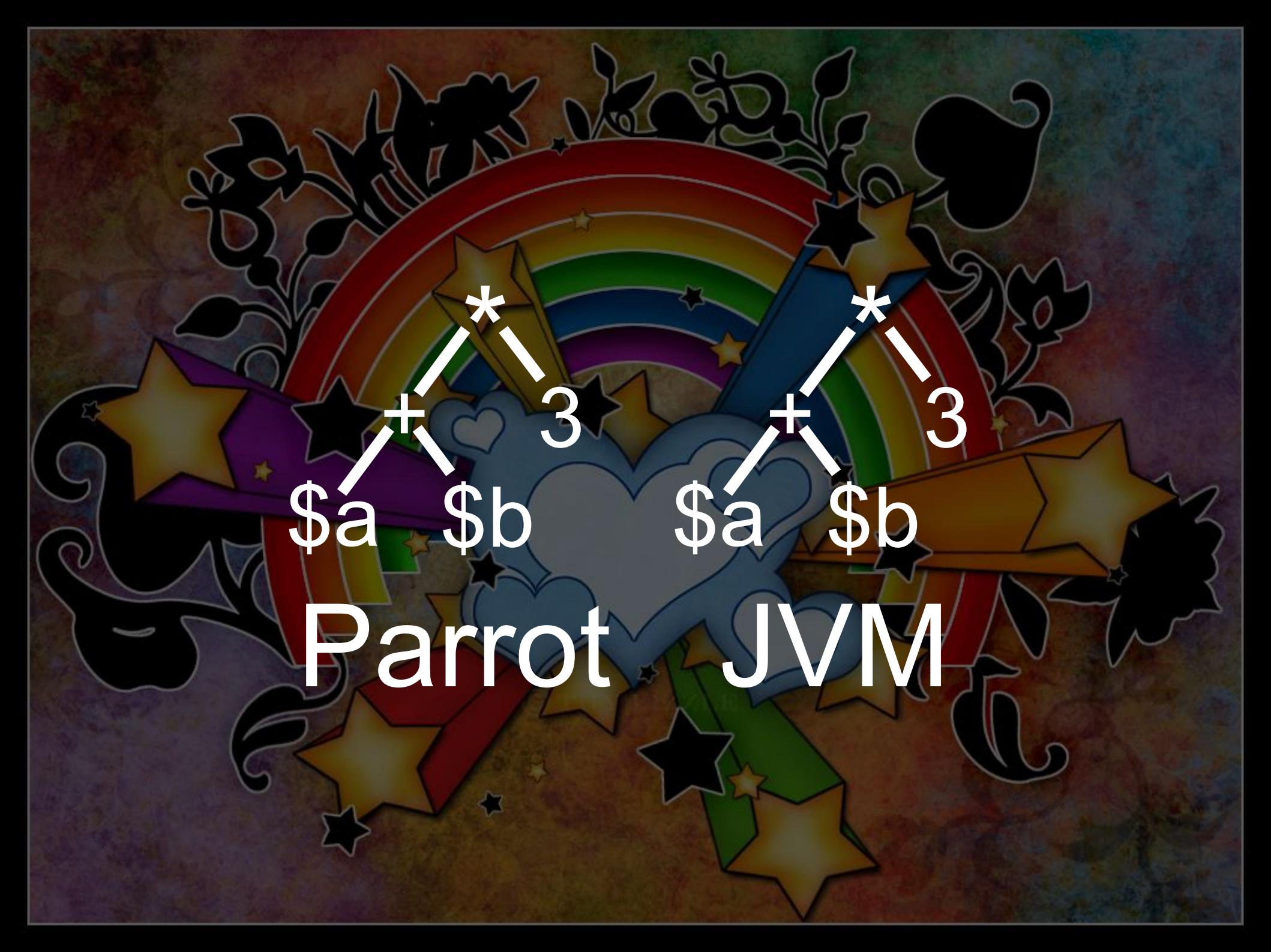
3



A vibrant, stylized illustration serves as the background. It features a central rainbow arching across the frame, flanked by several large, glowing yellow stars of varying sizes. Below the stars are white heart shapes and wispy, cloud-like formations. The background has a textured, painterly appearance with colors transitioning from dark blues and purples at the top to warm yellows and oranges at the bottom.

\$a \$b 3

Parrot



Parrot JVM

\$a *
+---
\$b 3

\$a *
+---
\$b 3

Parrot JVM MoarVM

\$a \$b * 3

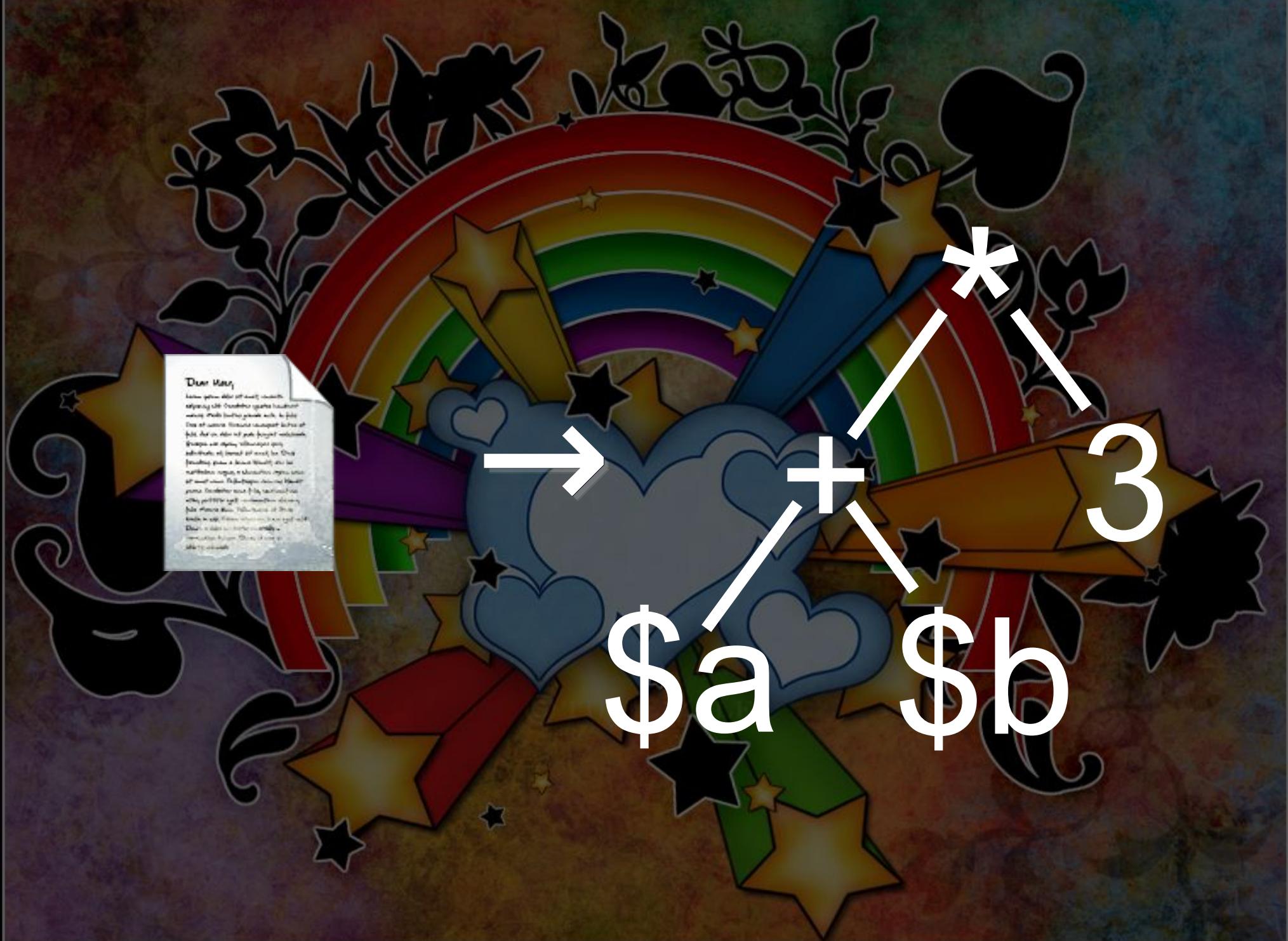
\$a \$b * 3

\$a \$b * 3

$\$a$ $\$b$?
* 3

JavaScript

\$a \$b
+-----
 *
 3



call
&say &slurp
„hello“ \$^O ...

```
use v6;  
my Int $a;  
say $a;  
{
```

```
use v5;  
say $a;  
{
```

```
use v6;  
say $a;
```

```
}
```

```
use v6;  
my Int $a;  
say $a; # „(Int)“  
{  
    use v5;  
    say $a;  
    {  
        use v6;  
        say $a;  
    }  
}  
}
```

```
use v6;  
my Int $a;  
say $a.gist; # „(Int)“  
{  
    use v5;  
    say $a;  
    {  
        use v6;  
        say $a;  
    }  
}  
}
```

```
use v6;  
my Int $a;  
say $a.gist; # „(Int)“  
{  
    use v5;  
    say $a; # „  
    {  
        use v6;  
        say $a;  
    }  
}  
}
```

```
use v6;  
my Int $a;  
say $a.gist; # „(Int)“  
{  
    use v5;  
    &P5say $a; # „  
    {  
        use v6;  
        say $a;  
    }  
}  
}
```

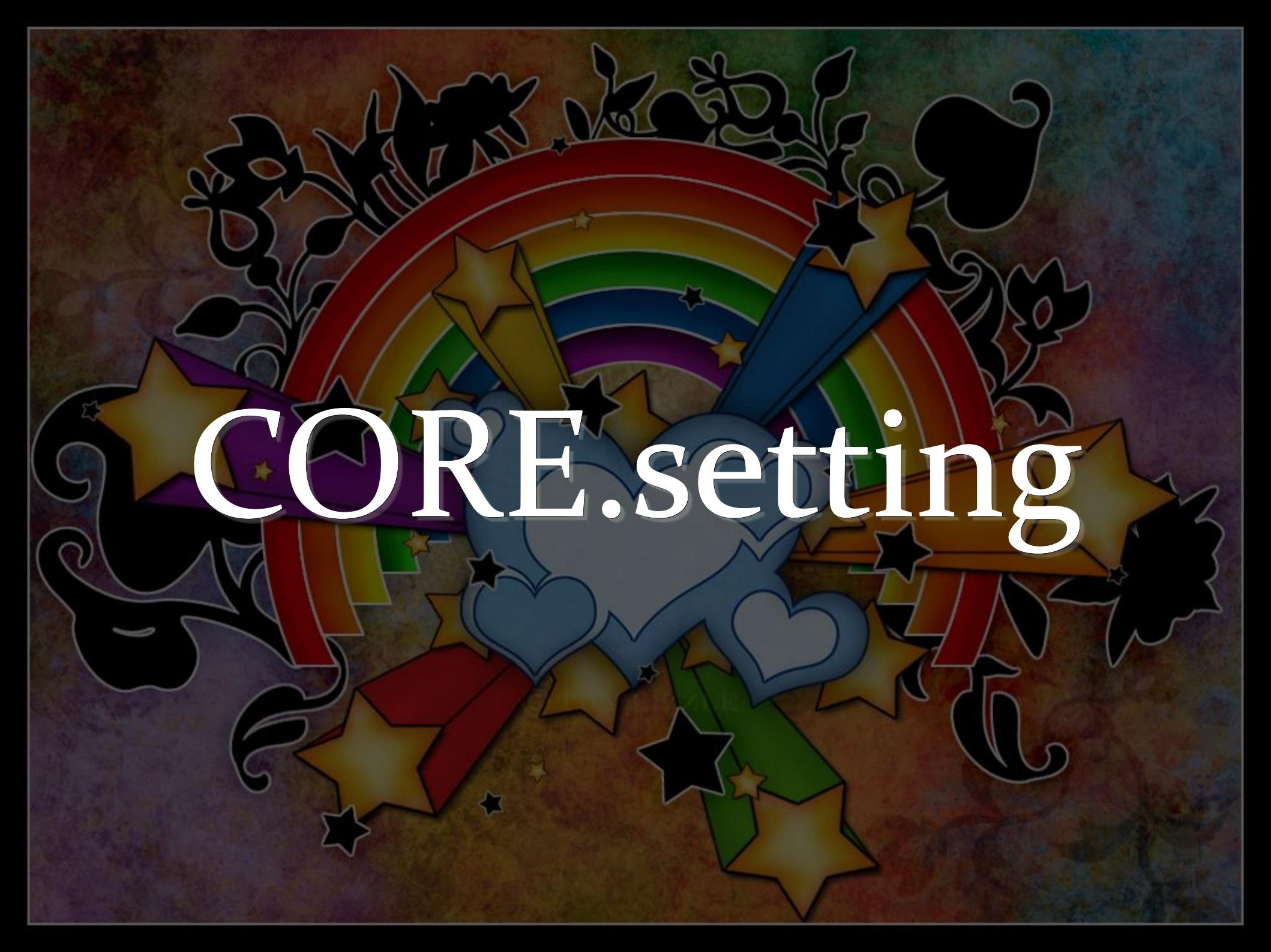
```
use v6;  
my Int $a;  
say $a.gist; # „(Int)“  
{  
    use v5;  
    &P5say $a; # „  
    {  
        use v6;  
        say $a; # „(Int)“  
    }  
}  
}
```

```
multi P5Str(Mu:U) {
    P5warn(:cat<uninitialized>,
        'Use of uninitialized value in string');
}

multi P5Str(Bool:D \$s) { s ?? 1 !! " " }
multi P5Str(Int:D \$s) { s.Int }
multi P5Str(Num:D \$s) { s.Num }
multi P5Str(Parcel:D \$s) { s.Int }
multi P5Str(Sub:D \$s) {
    'CODE(' ~ s.WHERE(fmt('ox%X').lc ~ ')'
}
```

```
multi P5Str(Mu:U) {
    P5warn(:cat<uninitialized>,
        'Use of uninitialized value in string');
}

multi P5Str(Bool:D \$s) { s ?? 1 !! " " }
multi P5Str(Int:D \$s) { s.Int }
multi P5Str(Num:D \$s) { s.Num }
multi P5Str(Parcel:D \$s) { s.Int }
multi P5Str(Sub:D \$s) {
    'CODE(' ~ s.WHERE(fmt('ox%X').lc ~ ')'
}
```



CORE.setting

20799

```
my role Positional { ... }
my role Associative { ... }
my role Callable { ... }
```

```
my $!;
my $/;
my $_[
```

```
proto infix:<&&>(|) { * }
multi infix:<&&>(Mu $x = Bool::True) { $x }
multi infix:<&&>(Mu \a, Mu \b) { a && b }
```

Perl5::Terms



1459

1459..*



The background of the image is a textured, multi-colored surface with shades of brown, orange, and blue. Overlaid on this are several stylized elements: a central rainbow arching from the left to the right; several five-pointed stars in yellow, orange, and black; several blue heart shapes; and large, dark, leaf-like or flame-like shapes. The overall aesthetic is whimsical and celebratory.

conditions

if (EXPR) BLOCK
elsif (EXPR) BLOCK
...
else BLOCK

unless (EXPR) BLOCK
elsif (EXPR) BLOCK
...
else BLOCK



**EXPR if EXPR
EXPR unless EXPR**

The background of the image is a vibrant, textured collage featuring several rainbows in various colors (red, orange, yellow, green, blue, purple) and sizes. Interspersed among the rainbows are numerous stars of different shapes and sizes, some with black outlines and others filled with color. There are also several stylized heart shapes in shades of blue and grey. The overall composition is whimsical and celebratory.

loops



LABEL while (EXPR) BLOCK
continue BLOCK

LABEL until (EXPR) BLOCK
continue BLOCK

LABEL for (EXPR; EXPR; EXPR) BLOCK

LABEL for VAR (LIST) BLOCK continue
BLOCK

LABEL foreach VAR (LIST) BLOCK
continue BLOCK



LABEL BLOCK continue BLOCK



BEGIN BLOCK



use
require

chdir
chr
close
each
int
not
open
ord
pack
pop
pos
print

push
rand
ref
say
shift
splice
split
substr
time
unlink
unpack
unshift

< > <= > = lt gt le ge

== != <=> eq ne cmp ~~

& | ^ && || //

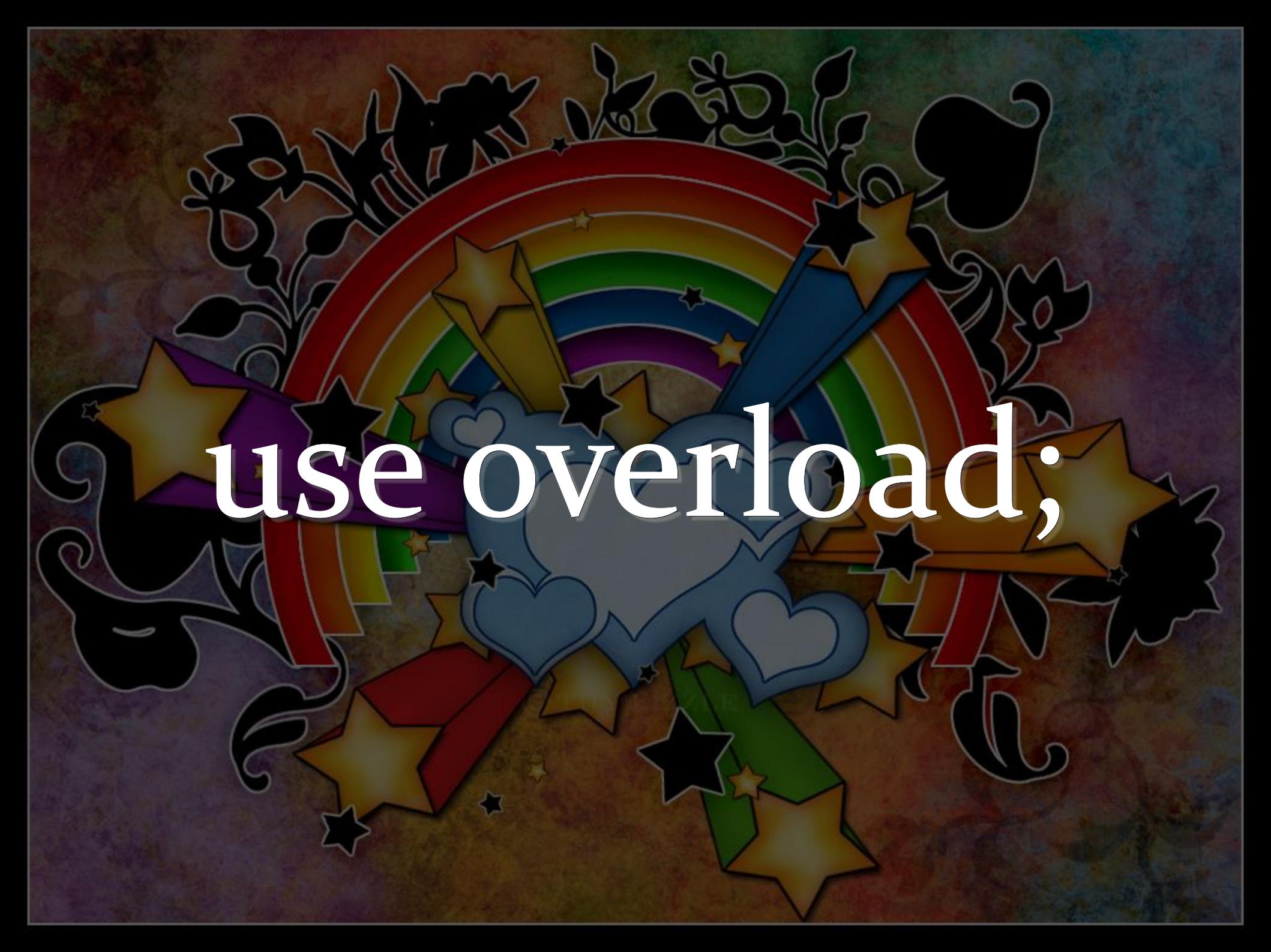
.. ... ? :

= + = - = * = etc.

, => not and xor



use overlord!

The background of the slide is a vibrant, colorful illustration. It features a central rainbow arching across the middle, composed of red, orange, yellow, green, blue, and purple bands. Numerous five-pointed stars of various sizes and colors (yellow, orange, red, purple) are scattered throughout, some with small trails. Large, stylized leaves in shades of black, purple, and blue are interspersed among the stars. A large, light blue heart is positioned in the center-left area. The overall style is whimsical and artistic, with a hand-drawn feel.

use overload;



use overload

""" => sub {'(.ref(shift).)'}



sub foo(\$){}



my \$bar;
sub foo :lvalue { \$bar }

use vars qw(%foo);



use warnings
qw(uninitialized);



use strict;

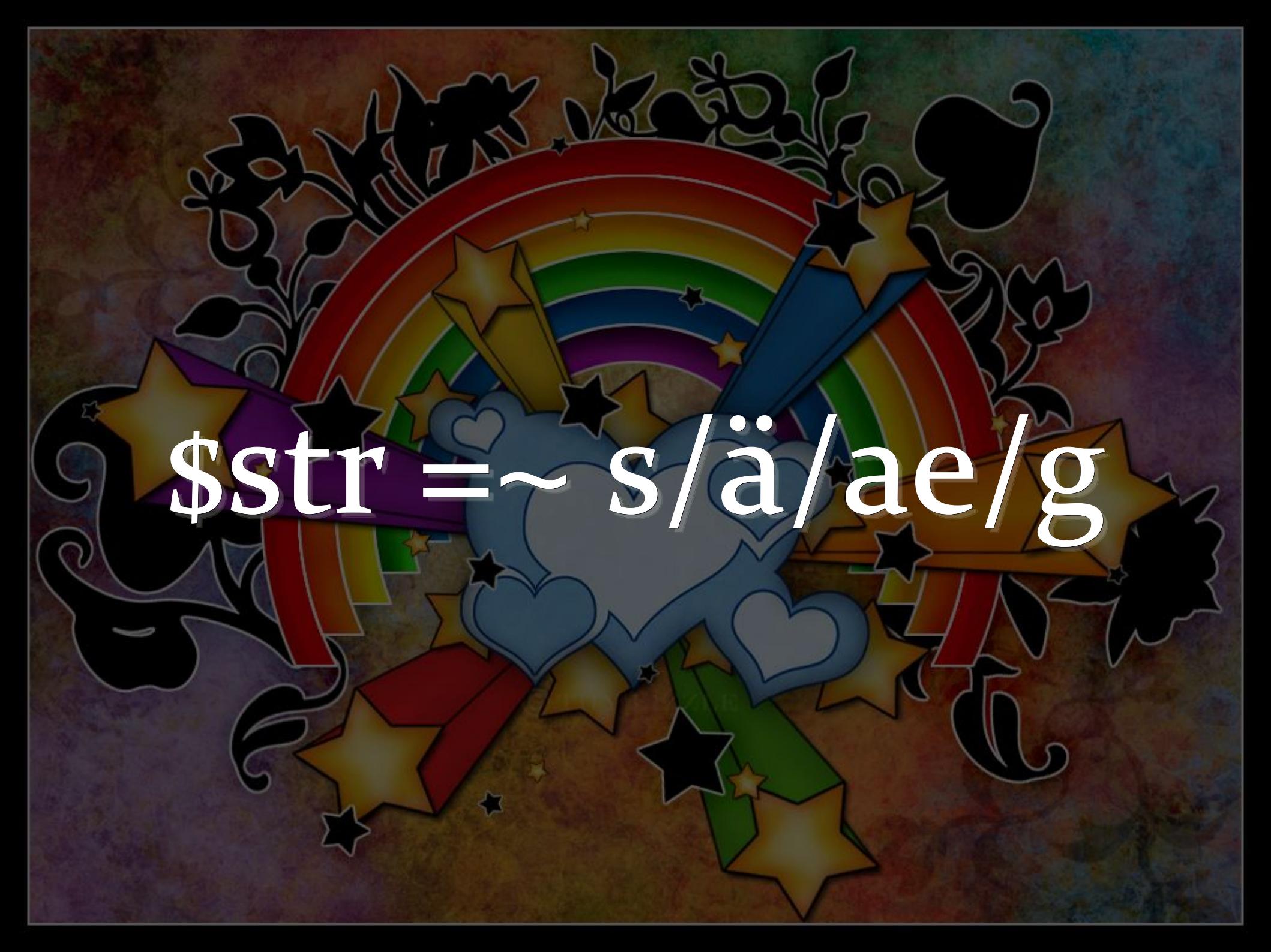


use Config;
use English;

```
use if ($] >= 5.01),  
strict => 'subs';
```



sub bar{
 goto &foo;
}



\$str =~ s/ä/ae/g

open FH '>', 'foo'

The background of the image is a vibrant, abstract illustration. It features a central rainbow arching across the frame, composed of several curved bands of color. Numerous five-pointed stars of various sizes and colors (yellow, orange, red, green, blue) are scattered throughout, some with motion-like trails. Large, stylized black outlines of leaves, flowers, and swirls are interspersed among the shapes. The overall aesthetic is whimsical and celebratory, resembling a children's book illustration.

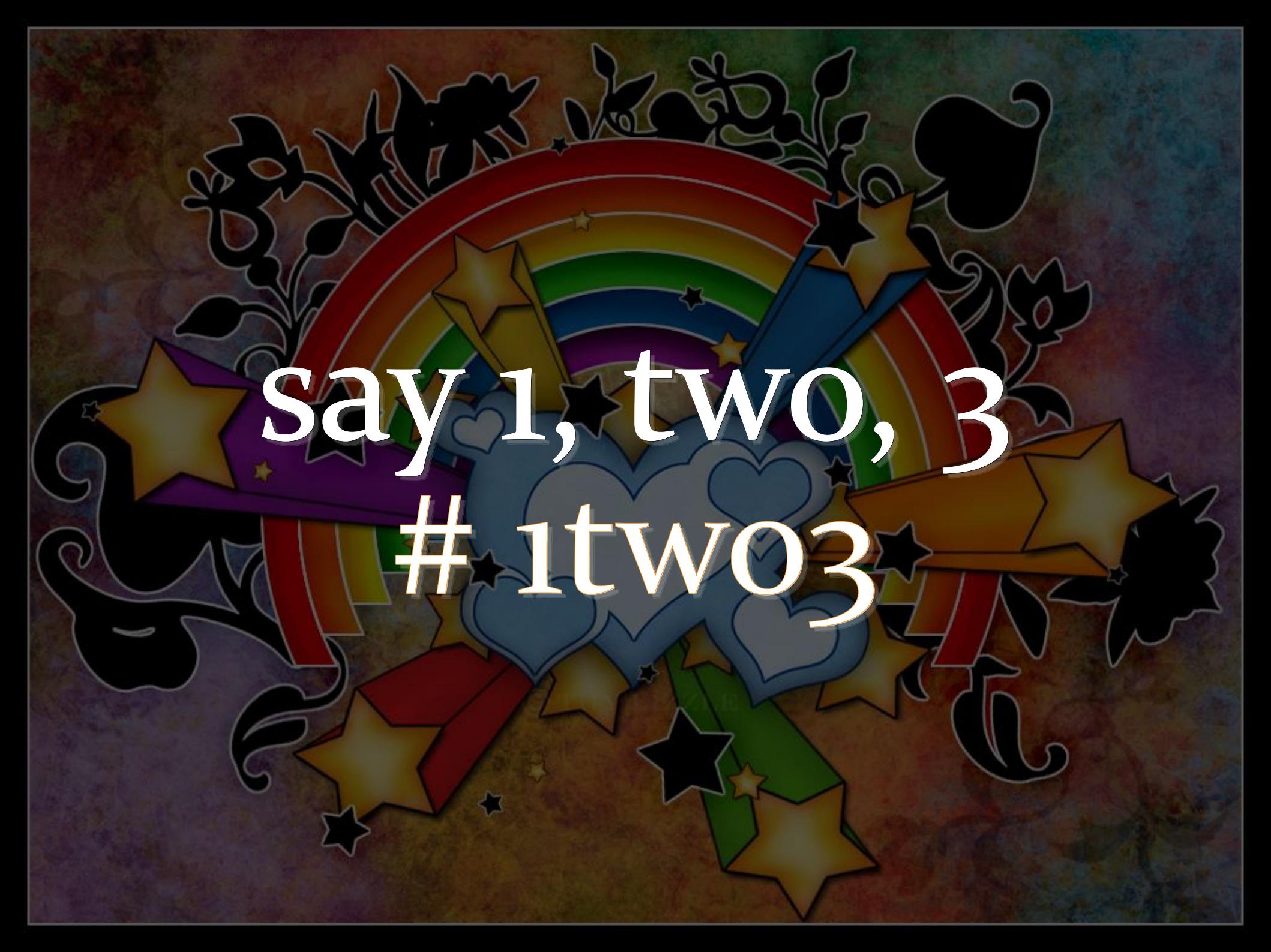
new SDL::Rect





next LABEL
last LABEL
redo LABEL

goto LABEL



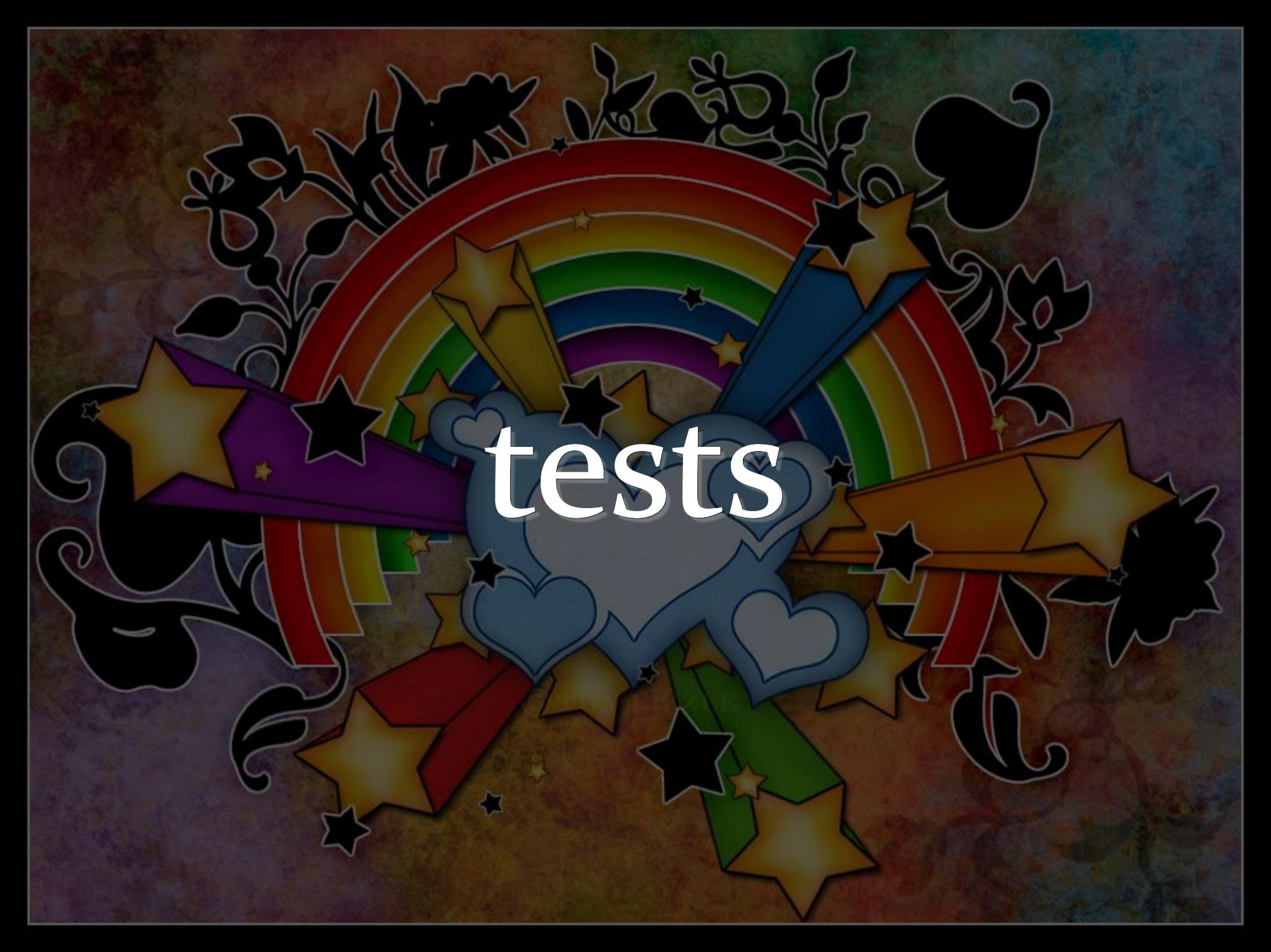
say 1, two, 3
#1two3

AnyDBM_File Benchmark Carp



never?

XS



tests

8093

42906





>92000



FROGGS
usev5.wordpress.com
freenode/#perl6
FROGGS@cpan.org
github.com/FROGGS