DRUPALCON LONDON

Living, Breathing, Drupal
The Biology of the Request

#dclsafari

Presented by Kenny Silanskas webkenny

Drupal: The System

Observer and Visitor

Wow, this guy is boring.

Does he really think anyone is going to learn like this?

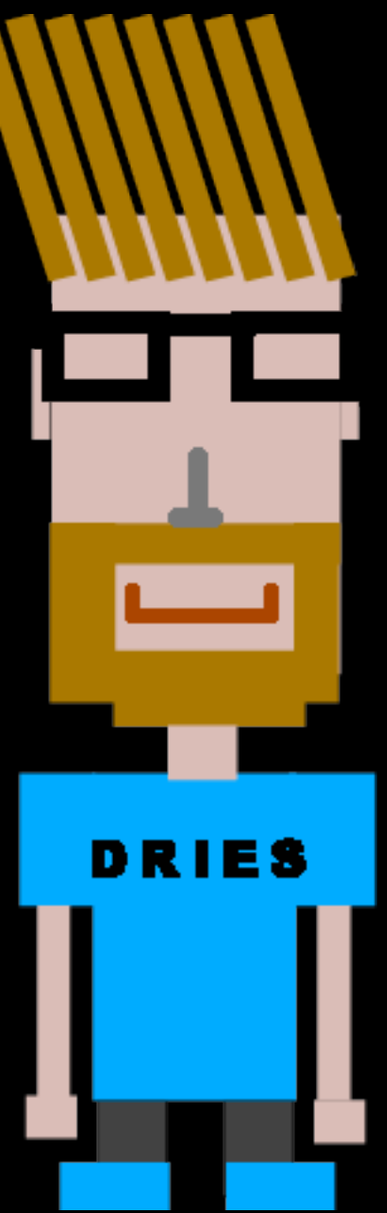
I'd rather be eaten by a Grue

than hear anymore.

Surely, he can’t be serious.

</horriblejoke>

The Request



The Legend Of Drupal

PRESS START BUTTON

THE BOOTSTRAP

[NEW PLAYER]

SAMUS

LINK

ENTER YOUR NAME

UPDATE.PHP MODE

CONFIGURATION PHASE

A B C D E F G H I J K

L M N O P Q R S T U V

W X Y Z $ & - ! , .

settings.php

```
ini_set('memory_limit', '128M')
ini_set('session_lifetime', 3600)
```

REGISTER

THE BOOTSTRAP

[NEW PLAYER]

SAMUS

Think of the Page Cache phase like a saved game!

LINK

ENTER YOUR NAME

UPDATE.PHP MODE

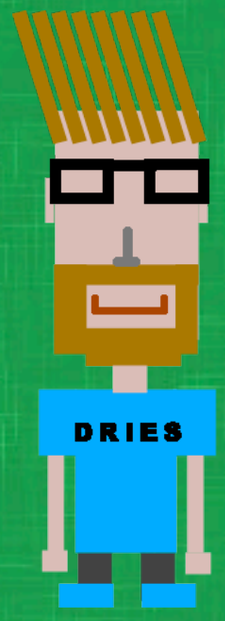
LOADING...

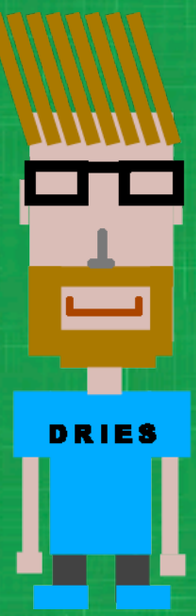
_drupal_bootstrap_database()

THE LEGEND OF DRUPAL

MANY YEARS AGO THE EVIL PRINCE DARKNESS KITTON STOLE ONE OF THE TRICORE WITH POWER, THE GOLDEN HOOK. PRINCESS DRUPAL HAD ONE OF THE TRICORE WITH WISDOM. SHE TRAVELED TO THE END OF THE ISLAND TO HIDE IT FROM KITTON BEFORE SHE WAS CAPTURED BY HIS EVIL ARMY.

GO FIND THE CRYSTAL NODE "DRIES" TO SAVE HER!


DRIES



INVENTORY

Glasses

DrupalCon Tee-Shirt

Hair Gel

iPhone

Variables Phase

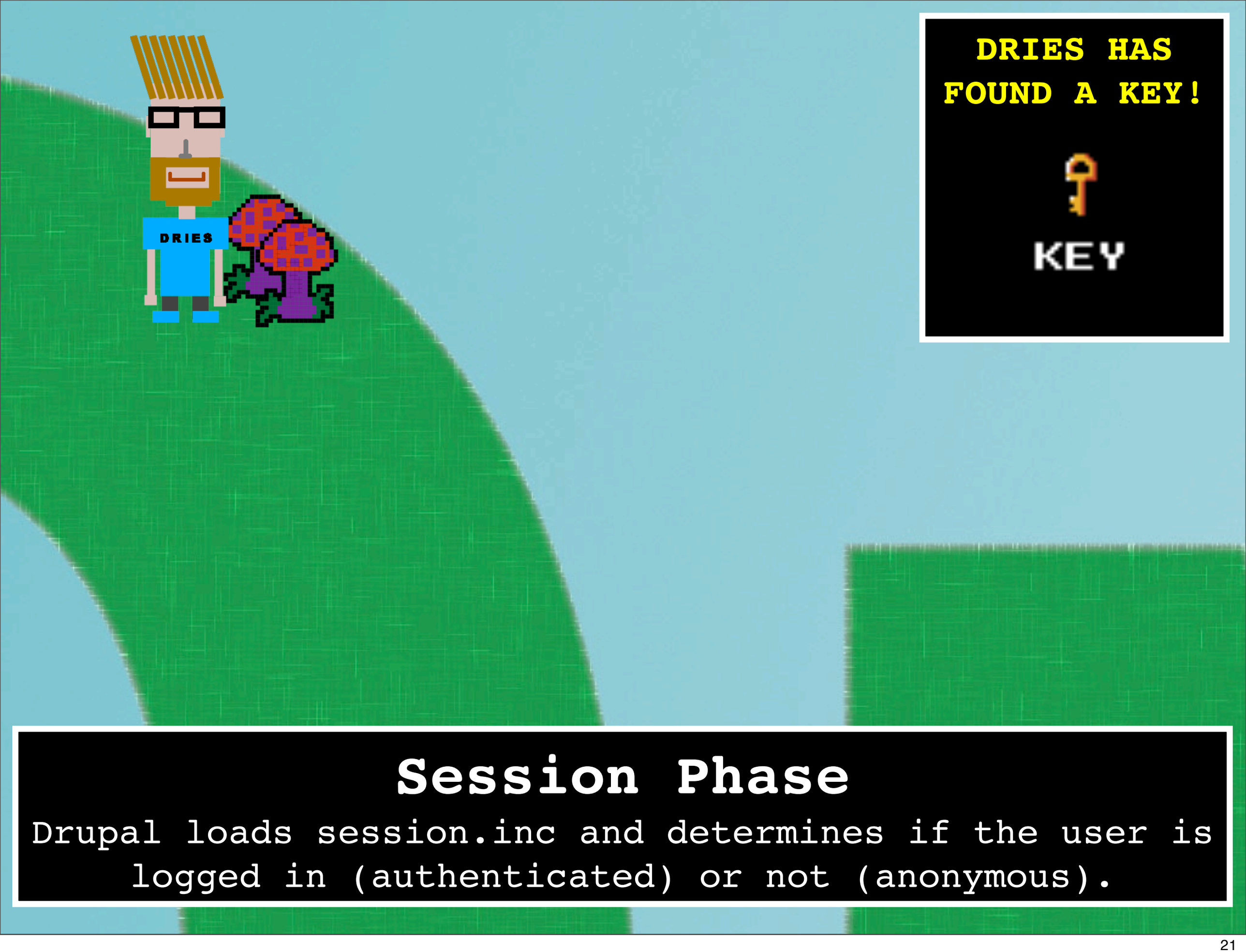
This is where the $conf array in Drupal is loaded with all of the variables needed for a request.

```
<?php
function
_drupal_bootstrap_page_header()  {
  bootstrap_invoke_all('boot');

  if (!drupal_is_cli()) {
    ob_start();
    drupal_page_header();
  }
}
?>
```

Page Header Phase

hook_boot is called for all participating modules and, if Drupal is not on the command line (e.g. drush), a HTTP header is sent.

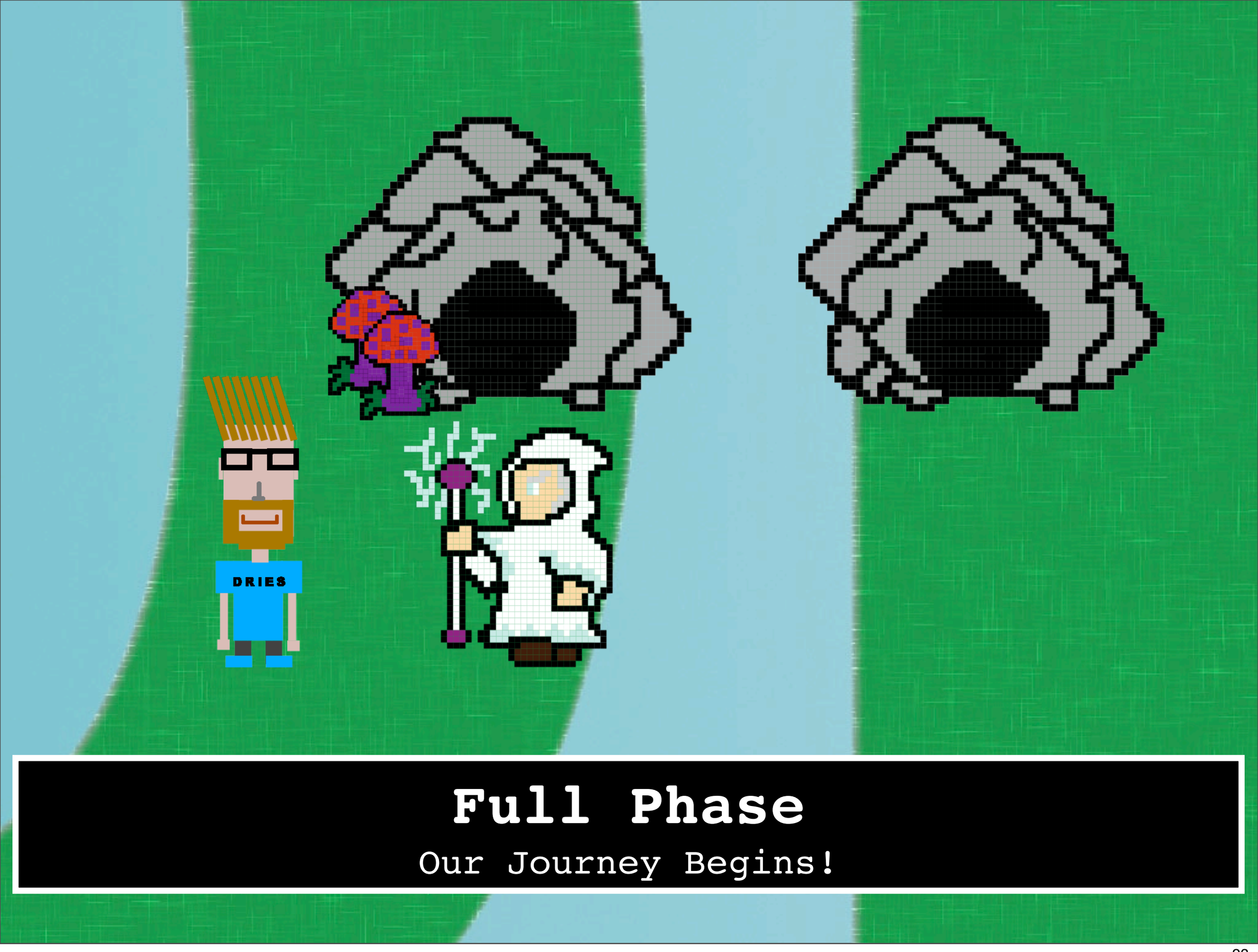


Session Phase

Drupal loads session.inc and determines if the user is logged in (authenticated) or not (anonymous).

Language Phase

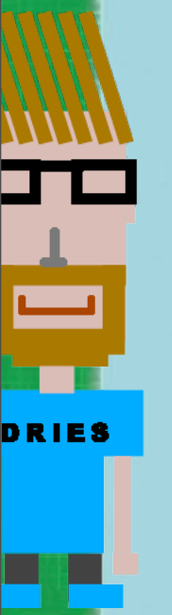
This is where the translation of Drupal's interface and strings takes place. e.g. t()



Full Phase

Our Journey Begins!

DRIES



HEY! PRESS SELECT FOR THE MAP, DRIES!

The Menu System

How does Dries (the request) know where to go next?

Where are we going?

```
$items['the_castle'] = array(...);
```

Can we get there?

```
= array('access callback' => user_access('foo'));
```

How do we get there?

```
= array('page callback' => '_zelda_map_page_view');
```

Onto the Haunted Hook Forest!

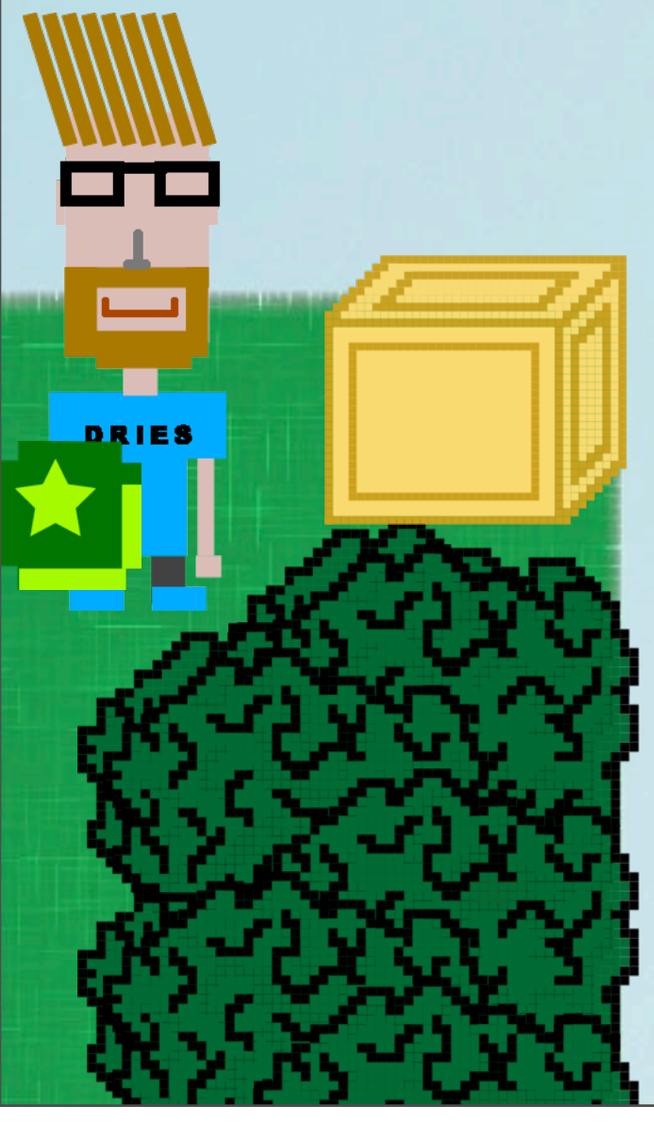
Where treasure and thieves await.

The Hook System

As Dries (the request) travels through the system, he may pick up $treasure along the way.

The Hook System

Variables are passed by reference. Like Dries' inventory, new things get added.



INVENTORY

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Hair Gel

iPhone

Shield

Hooks don’t just add.

Sometimes we use hooks, like **hook_form_alter** and **hook_menu_link_alter** to remove items we don’t want.

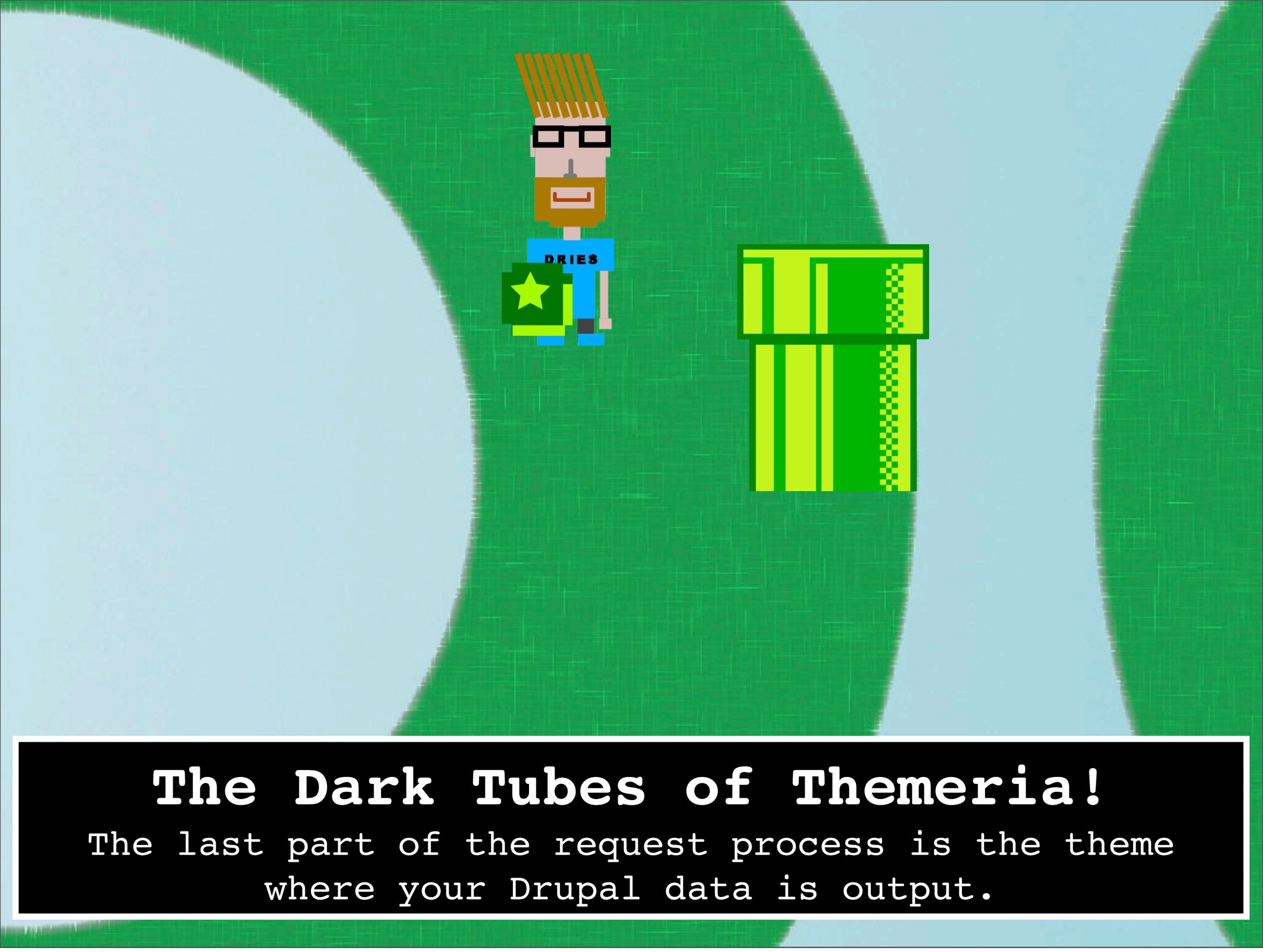
A thief draws near!

Command?

Block
Fight
Run
Cry

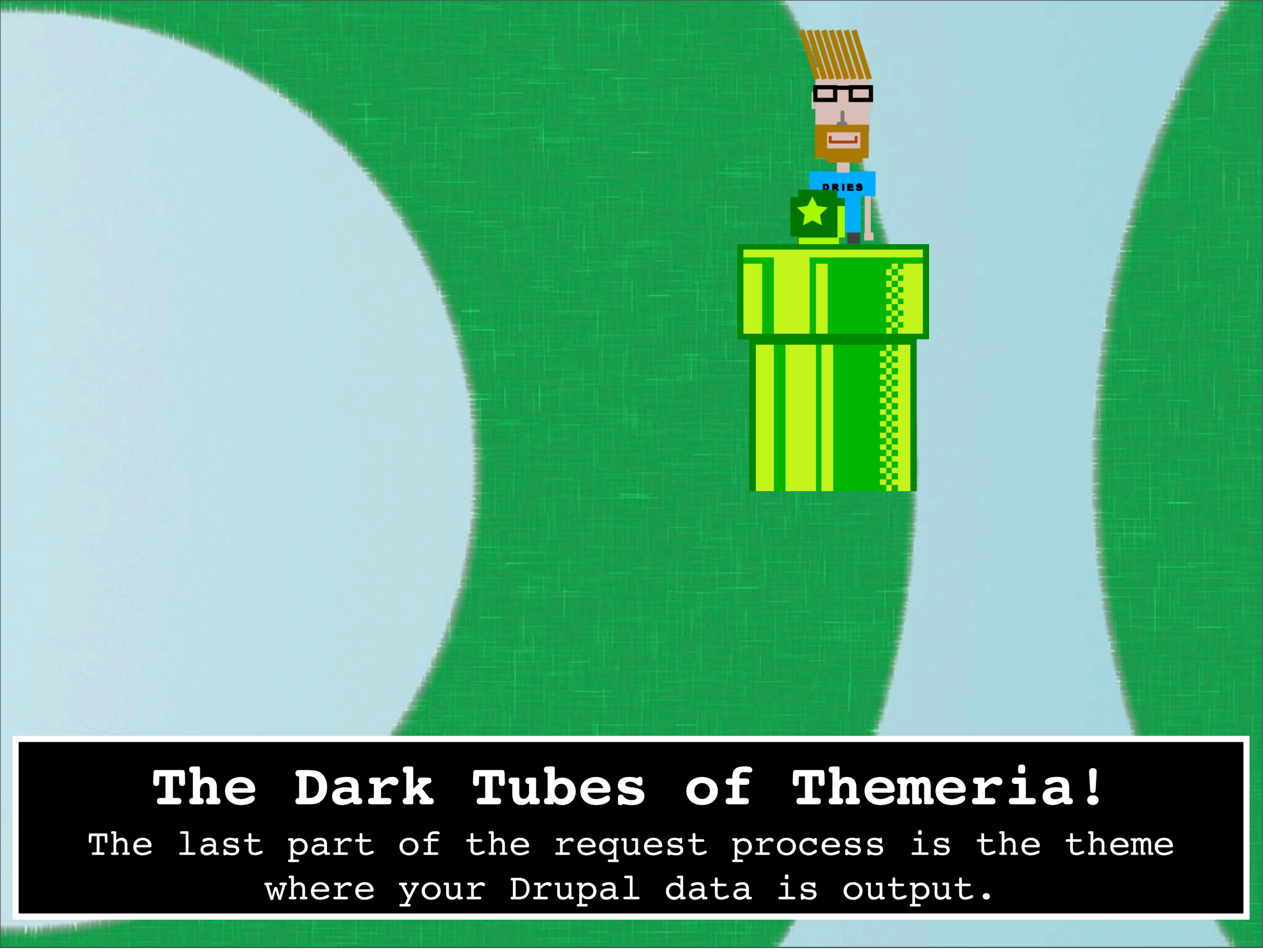
```
function module_invoke_all() {
  $args = func_get_args();
  $hook = $args[0];
  unset($args[0]);
  $return = array();
  foreach (module_implements($hook) as $module) {
    $function = $module . '_' . $hook;
    if (function_exists($function)) {
      $result = call_user_func_array($function, $args);
      if (isset($result) && is_array($result)) {
        $return = array_merge_recursive($return, $result);
      }
      elseif (isset($result)) {
        $return[] = $result;
      }
    }
  }

  return $return;
}
```



The Dark Tubes of Themeria!

The last part of the request process is the theme where your Drupal data is output.

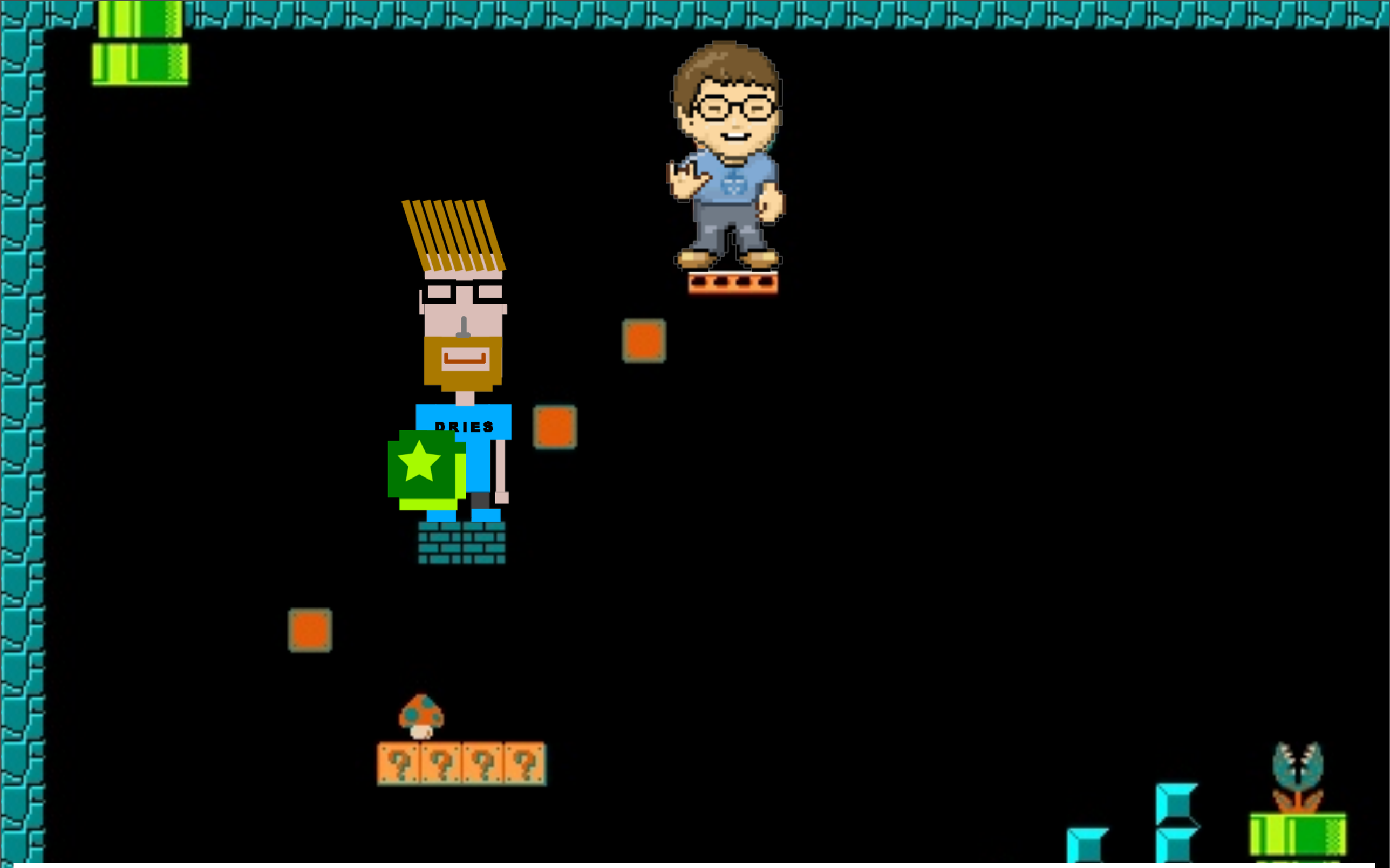


The Dark Tubes of Themeria!

The last part of the request process is the theme where your Drupal data is output.

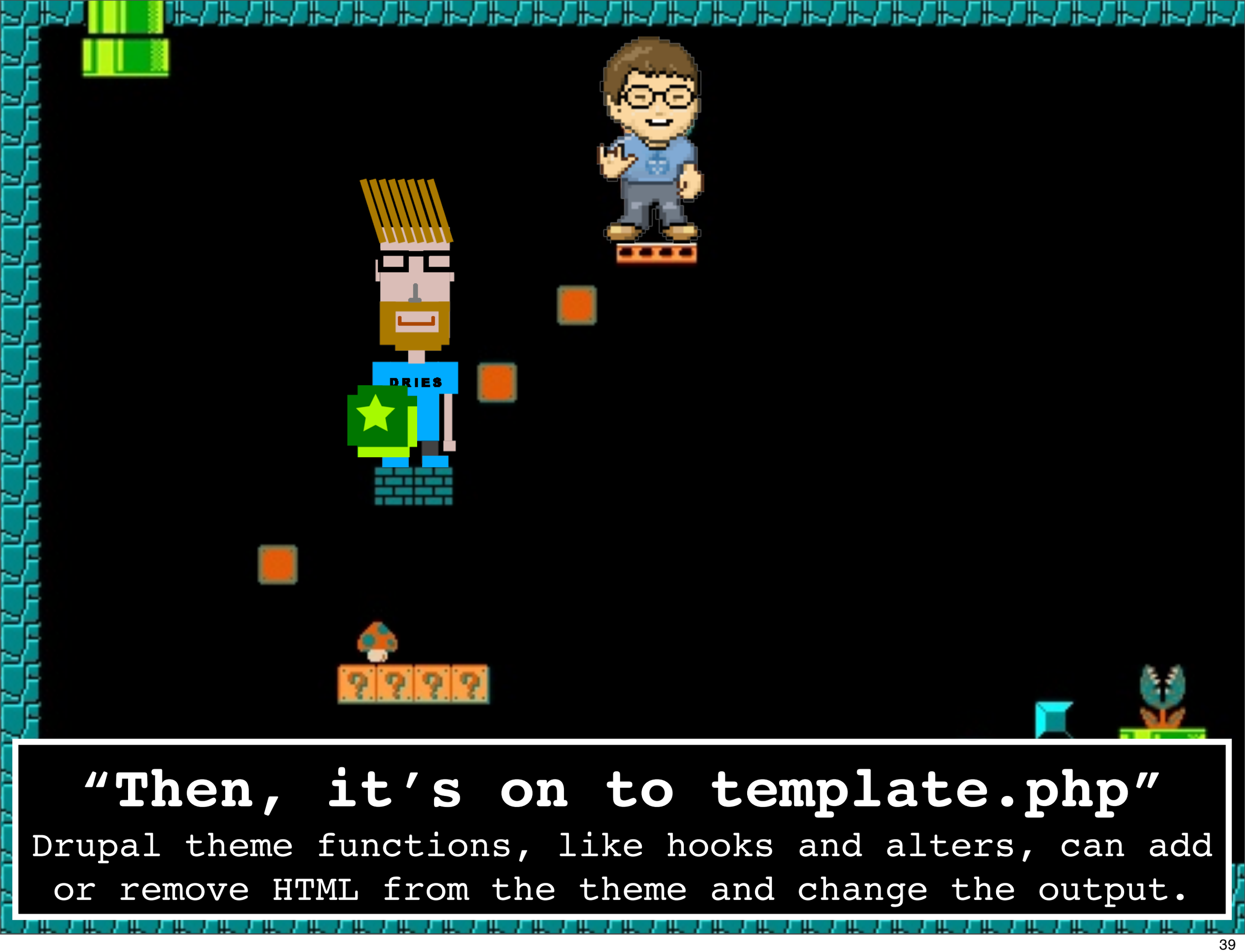
“Teach me, oh wise one!”

Angie (a.k.a webchick) Byron, our hero’s mentor.



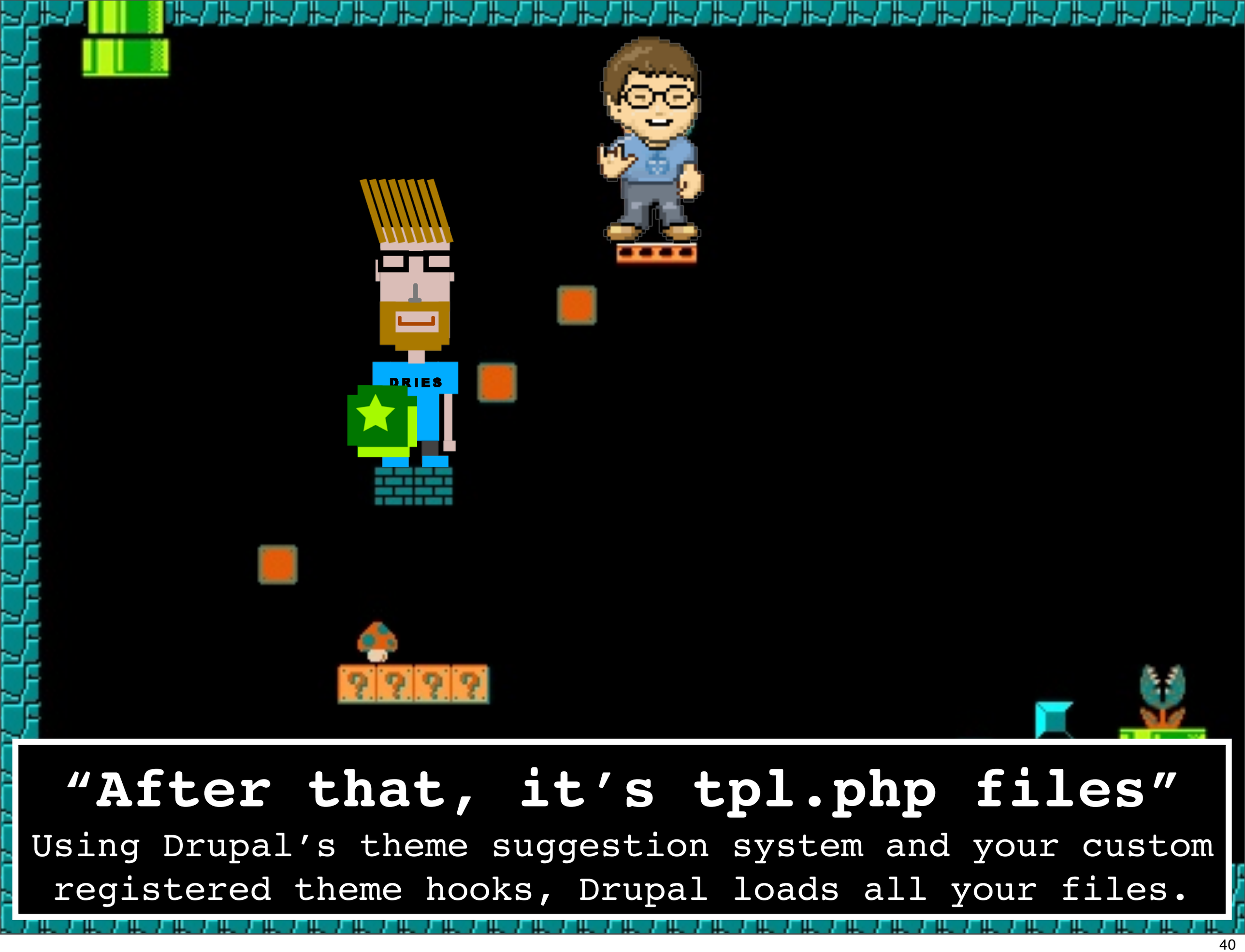
“First, the theme has to load!”

Drupal decides which theme it will use for the output.



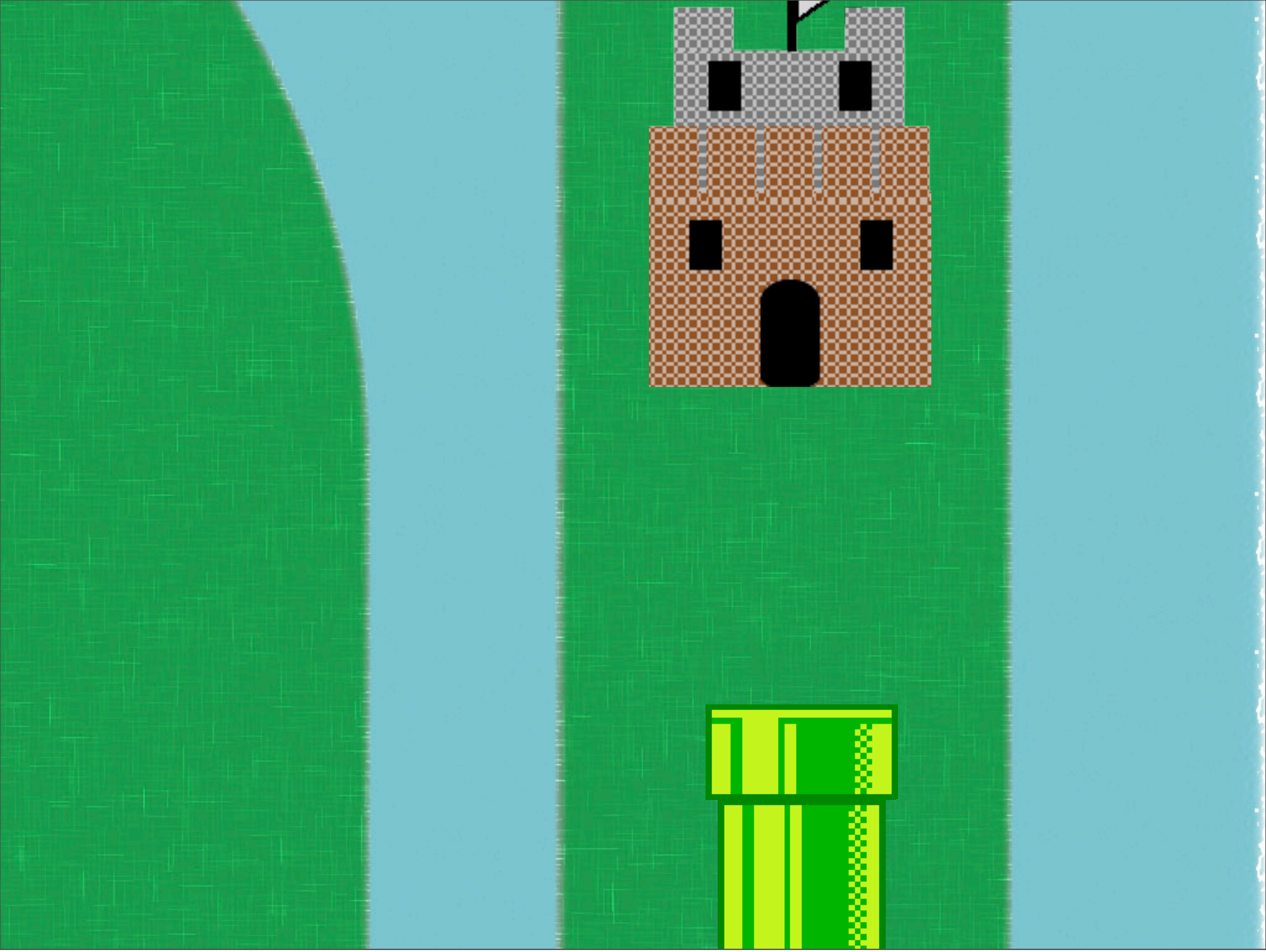
“Then, it’s on to template.php”

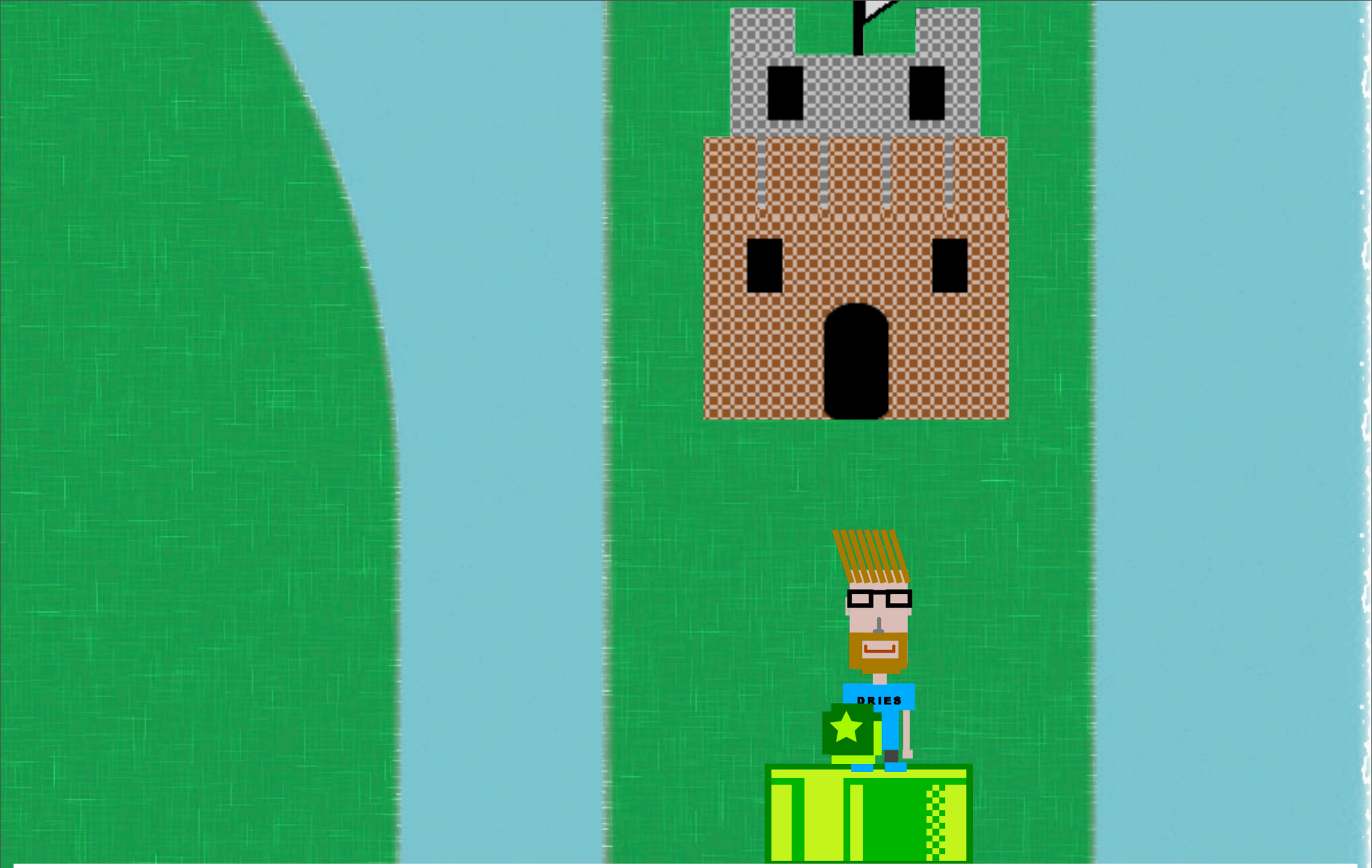
Drupal theme functions, like hooks and alters, can add or remove HTML from the theme and change the output.



“After that, it’s tpl.php files”

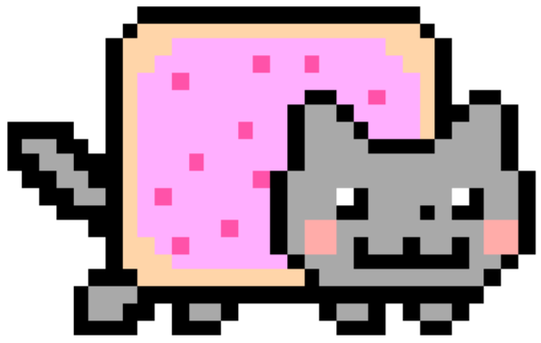
Using Drupal’s theme suggestion system and your custom registered theme hooks, Drupal loads all your files.

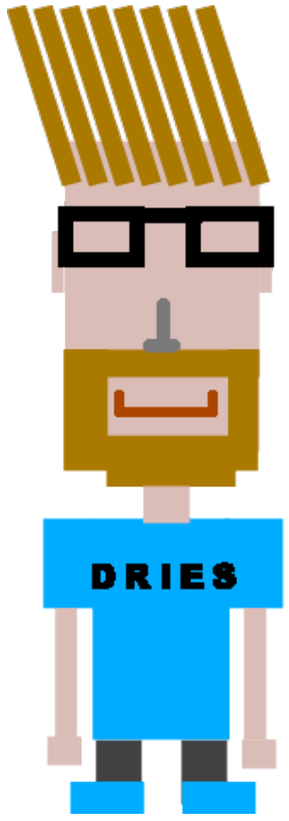




Finally, the castle of Kitton!

"I know the node is in there somewhere"





You've defeated Kitton!
But the node is in another castle.

GAME OVER

(But wait, there’s more)

What about updates?

update.php

The Magic System Table

It’s all about the numbers. The schema column.

So what?

What did you think?

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http://london2011.drupal.org/conference/schedule

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THANK YOU!