Computation as an Expressive Medium

Lab 7: Chilli, Trek Wars and Bad Movies

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Agenda

- Java Mode
- External libraries
- HTML Parsing, Part I
- Exceptions and try
- Assignment 3
- Project 3
Java Mode

class iHateProcessing extends PApplet
{
    ...
}

- Only if you want to code your class in straight Java

- Don’t stress out about this
Importing Libraries

- What is a library?
Importing Libraries
Importing Libraries

- **Step 1:**
  Processing > libraries > chilli > library > chilli.jar

- **Step 2:**
  import chili.*;

- **Step 3:** Read the library documentation and examples
It is a period of civil war. Rebel spaceships, striking from a hidden base, have won their first victory against the evil Galactic Empire. During the battle, Rebel spies managed to steal secret plans to the Empire’s ultimate weapon, the DEATH STAR, an armored space station with enough power to destroy an entire planet. Pursued by the Empire’s sinister agents, Princess Leia races home aboard her starship, custodian of the stolen plans that can save her people and restore freedom to the galaxy....
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HTML

- HyperText Markup Language
- The stuff webpages are made of
## HTML

<table>
<thead>
<tr>
<th>Tags</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;b&gt;</code>To Boldly Go…&lt;/b&gt;</td>
<td>To Boldly Go…</td>
</tr>
<tr>
<td><code>&lt;i&gt;</code>To Boldly Go…&lt;/i&gt;</td>
<td>To Boldly Go…</td>
</tr>
<tr>
<td><code>&lt;font color = “red”&gt;</code>To Boldly Go…&lt;/font&gt;</td>
<td>To Boldly Go…</td>
</tr>
<tr>
<td>To Boldly <code>&lt;br /&gt;</code> Go…</td>
<td>To Boldly Go…</td>
</tr>
<tr>
<td><code>&lt;ul&gt;</code></td>
<td></td>
</tr>
<tr>
<td><code>&lt;li&gt;</code>To&lt;/li&gt;`</td>
<td>•To</td>
</tr>
<tr>
<td><code>&lt;li&gt;</code>Boldly&lt;/li&gt;`</td>
<td>•Boldly</td>
</tr>
<tr>
<td><code>&lt;li&gt;</code>Go…&lt;/li&gt;`</td>
<td>•Go</td>
</tr>
<tr>
<td><code>&lt;/ul&gt;</code></td>
<td></td>
</tr>
</tbody>
</table>

http://www.w3schools.com/tags/default.asp
http://www.web-source.net/html_codes_chart.htm
http://www.quackit.com/html/tags/
Space: The Final Frontier. These are the voyages of the <b>Starship Enterprise</b>. It’s continuing mission: to explore strange new worlds, to seek out new life and new civilizations, <b>to boldly go</b> where no one has gone before.
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Next Week...

HTMLParser

http://htmlparser.sourceforge.net
java.lang.NullPointerException
    at processing.app.debug.Compiler.contentsToClassPath(Compiler.java:699)
at processing.app.Sketch.preprocess(Sketch.java:1421)
at processing.app.Sketch.build(Sketch.java:1473)
at processing.app.Sketch.compile(Sketch.java:1172)
at processing.app.Editor.handleRun(Editor.java:1574)
at processing.app.EditorToolbar.mousePressed(EditorToolbar.java:318)
at java.awt.Component.processMouseEvent(Component.java:6260)
at javax.swing.JComponent.processMouseEvent(JComponent.java:3267)
at java.awt.Component.processEvent(Component.java:6028)
at java.awt.Container.processEvent(Container.java:2041)
at java.awt.Component.dispatchEventImpl(Component.java:4630)
at java.awt.Container.dispatchEventImpl(Container.java:2099)
at java.awt.Component.dispatchEvent(Component.java:4460)
at java.awt.LightweightDispatcher.retargatMouseEvent(Container.java:4574)
at java.awt.LightweightDispatcher.processMouseEvent(Container.java:4235)
at java.awt.LightweightDispatcher.dispatchEvent(Container.java:4168)
at java.awt.Container.dispatchEventImpl(Container.java:2085)
at java.awt.Window.dispatchEventImpl(Window.java:2475)
String[] thingsIHate = { "violence", "dishonesty", "racism", "Dude, Where’s My Car? " };  

for(int i = 0; i < 5; i++)
{
    println(thingsIHate[i]);
}
String[] thingsIHate = { "violence", "dishonesty", "racism", "Dude, Where’s My Car? " };

try {
    for(int i = 0; i < 5; i++)
    {
        println(thingsIHate[i]);
    }
} catch (ArrayIndexOutOfBoundsException e) {
    println("Your array is too small, idiot!");
}
Exceptions

String[] thingsIHate = { "violence", "dishonesty", "racism", "Dude, Where’s My Car? " };

try {
    for(int i = 0; i < 5; i++)
    {
        println(thingsIHate[i]);
    }
}

catch (ArrayIndexOutOfBoundsException e)
{
    println("Your array is too small, idiot!");
    println("You got the following error: " + e);
}
Review

- Turn on Java mode with PApplet
- Bring in libraries to do more cool stuff
- Get the gist of text parsing (more next week!)
- Deal with exceptions
Project 3

Literary machines are potential literature, procedurally producing textual traces in response to interaction. Examples of literary machines include interactive fiction, nodal hypertexts, interactive poetry (often with animated typography) and chatterbots. Create a literary machine. The literary machine must include algorithmic elements, such as animated typography, generated text, conditional responses as a function of the previous interaction trace. It must respond to external inputs (e.g. user interaction). Your piece may include conjunctions of text and imagery.
Project 3 - Translated

- Do something snazzy with text
- Make it interactive
- Give it literary value
- Use images (optional)
Project Grading Criteria

- **Concept**
  - 1 if not great

- **Technical Realization**
  - 1 if it crashes
  - 1 if the interface is counterintuitive or hard to use

- **Visual Design**
  - 1 if not great
Assignment 3

A3-01: Create a subclass of PImage that implements a mosaic(int blockSize) method. The blockSize parameter specifies how big the mosaic block is (e.g. blockSize = 4 would mean the mosaic block size is 4 pixels by 4 pixels). The mosaic method should replace each block of pixels in the image (e.g. if blockSize = 4, each block of 4 by 4 pixels) with the average color value of the pixels in that block. Look at the Pixelate->Mosaic filter in Photoshop for an example of what this image operation does. Demonstrate your new class by drawing an image with several different block sizes. Include your example images with your submission.

A3-02: Write a small app that demonstrates kinetic text. Your app should allow the user to type something and the text moves around in some way while they type. For example, the user might type text on a line, but slowly the words or letters start drifting apart, or perhaps the line starts bending, or the words and letters flutter to the bottom of the screen, etc. Of course you shouldn't exactly copy any of the typographic examples in Processing or that you find on the web (though using such examples for inspiration, as a place to start modifying code, etc. is fine).