HTML, PHP and MySQL

"PHP is an HTML-embedded scripting language. Much of its syntax is borrowed from C, Java and Perl with a couple of unique PHP-specific features thrown in. The goal of the language is to allow web developers to write dynamically generated pages quickly." -php.net

HTML

Although, most of you probably have extensive HTML work. Here's a quick refresher.

Here's an example of a typical html.

```
<html>
<head>
<title>My WebPage!</title>
</head>
<body>
Hello World!
</body>
</html>
```

<html> begins and ends each and every web page. Its sole purpose is to encapsulate all the HTML code and describe the HTML document to the web browser. Remember to close your HTML documents with the corresponding </html> tag at the bottom of the document. The head functions "behind the scenes." Tags placed within the head element are not directly displayed by web browsers. If you decide to use other elements for scripting (Javascript) and formatting (CSS), they will be placed within your head element. The words you write between the opening and closing <title></title> tags will be displayed at the top of a viewer's browser.

For now, that's all we'll need to begin building our php program. Easy, yes, just remember this simple html format and don't forget to close your tags.

What is PHP?

PHP is an interpreted scripting language that allows a web server to create dynamic web pages or web services. It is a back-end server technology.

You use PHP to generate HTML programmatically before it is sent by the web server to a requesting client browser.

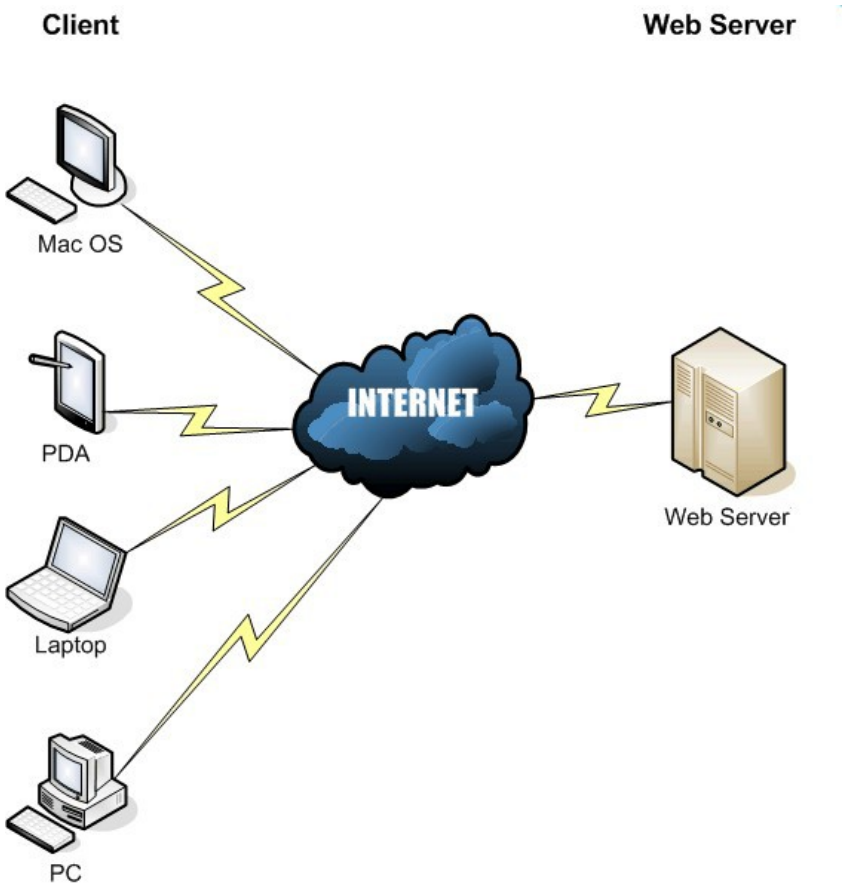
PHP is also used to process form data sent from a client browser. The web server invokes the PHP interpreter only when a URL is requested. All program state is lost between requests without special programming.

A dynamic web application written in PHP consists of a number of .php files on the host server, which are created by a developer with a text editor or IDE. PHP can

talk directly to a database server such as MySQL. Because PHP creates HTML, intimate knowledge of HTML coding is also required for professional results. Implementing event-driven user-interfaces and animation effects requires use of JavaScript and HTML.

WebServer

What is a Web Server? A computer program that is responsible for accepting HTTP requests from clients, which are known as web browsers, and serving them HTTP responses along with optional data contents, which usually are web pages such as HTML documents and linked objects (images, etc.).



If you want to install your own webserver on your laptop or personal PC, you can download the Apache, MySQL and PHP. The three come bundled together, referred to as either the WAMP, MAMP or LAMP according to whether you are installing them on Windows (W), a Mac (M), or Linux (L).

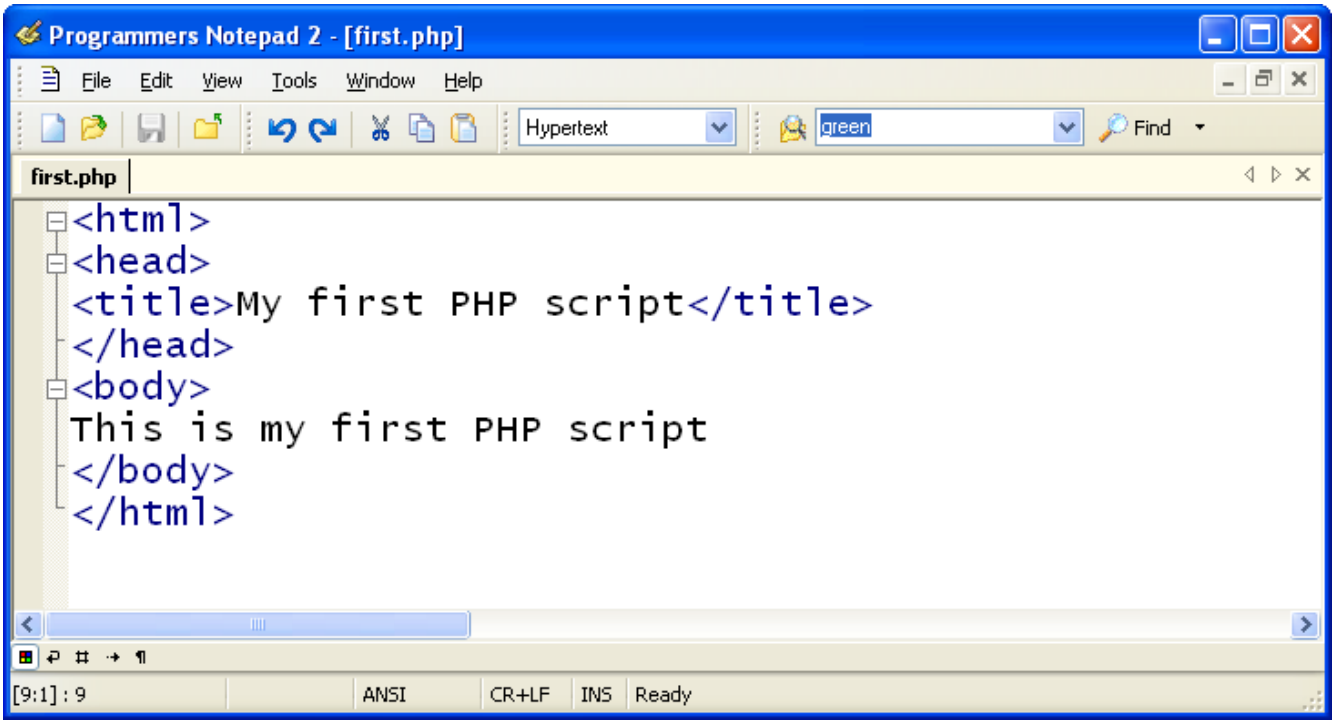
Windows Users : http://www.wampserver.com/en/
Mac Users : http://www.mamp.info/en/
Linux CentOS Users : https://www.digitalocean.com/community/tutorials/how-to-install-linux-apache-mysql-php-lamp-stack-on-centos-6

When you refer to the URL http://web.nmsu.edu/~your-login-name, you must have one of the following files in your public_html directory, else the web server disallows access to your directory:

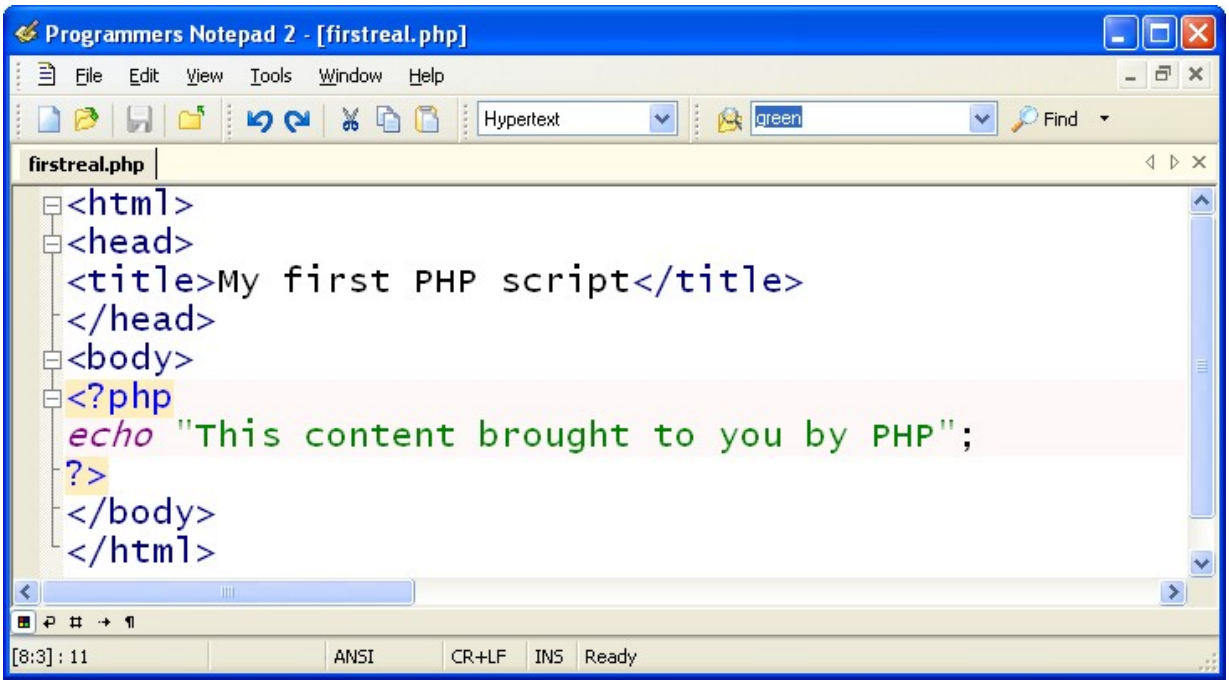
index.html - Hypertext Markup Language (HTML)
index.htm - HTML (alternate name)
index.php - PHP Hypertext Preprocessor v5

Back to PHP – Outputting To Screen

first.php is strickly using html to output to the screen. We can use PHP to do the same.



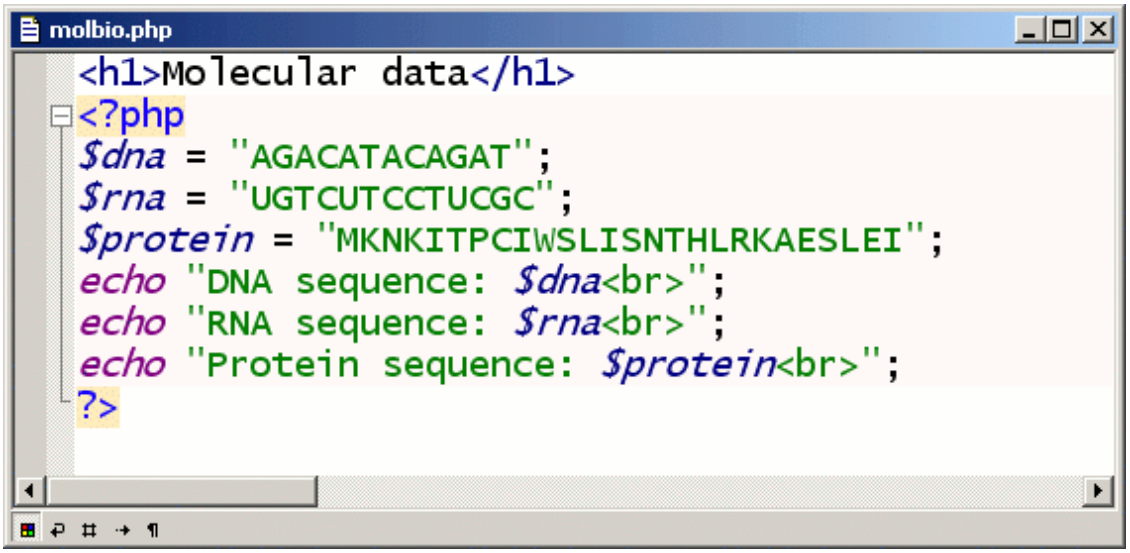
Using PHP, you would use “echo”



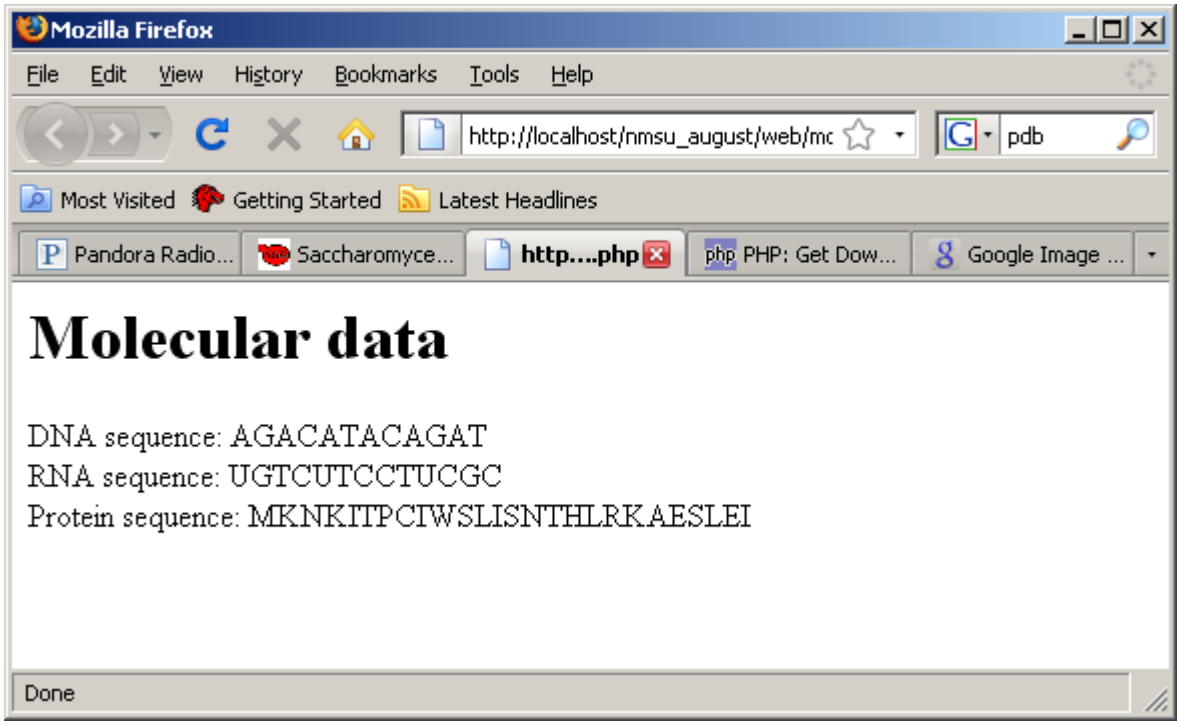
Variables in PHP ($variable_name = Value;)

- ☐ PHP variables must start with a letter or underscore "_".
- ☐ PHP variables may only be comprised of alpha-numeric characters and underscores. a-z, A-Z, 0-9, or _ .
- ☐ Variables with more than one word should be separated with underscores. $my_variable
- ☐ Variables with more than one word can also be distinguished with capitalization. $myVariable

If you forget that dollar sign at the beginning, it will not work. This is a common mistake for new PHP programmers!



If you run this program, the output will look like this.



Arithmetic and Comparsion Operators

Operator	English
+	Addition
-	Subtraction
*	Multiplication
/	Division
%	Modulus

Date & Numeric Fields :: Available Comparison Operators

Operator	Meaning	Example
<	less than	<2000
>	greater than	>1500
<=	less than or equal to	<=2005
>=	greater than or equal to	>=2007
=	equal to	=1500
<>	not equal to	<>1500
!=	not equal to	!=1500

A

adding an empty char between operator and value will work !

```
<?php
$addition = 2 + 4;
$subtraction = 6 - 2;
$multiplication = 5 * 3;
$division = 15 / 3;
$modulus = 5 % 2;
echo "Perform addition: 2 + 4 = ".$addition."<br />";
echo "Perform subtraction: 6 - 2 = ".$subtraction."<br />";
echo "Perform multiplication:  5 * 3 = ".$multiplication."<br />";
echo "Perform division: 15 / 3 = ".$division."<br />";
echo "Perform modulus: 5 % 2 = " . $modulus
      . ". Modulus is the remainder after the division operation has been performed.
      In this case it was 5 / 2, which has a remainder of 1.";
?php>
```

Note: embedded variables within echo. Also, “.”- the period is the concatenation operator for strings.

PHP Comments

If you want to comment outside php, you will need to use html comment style

<!--This is php/html comment-->

PHP has three comment styles “#” and “//”

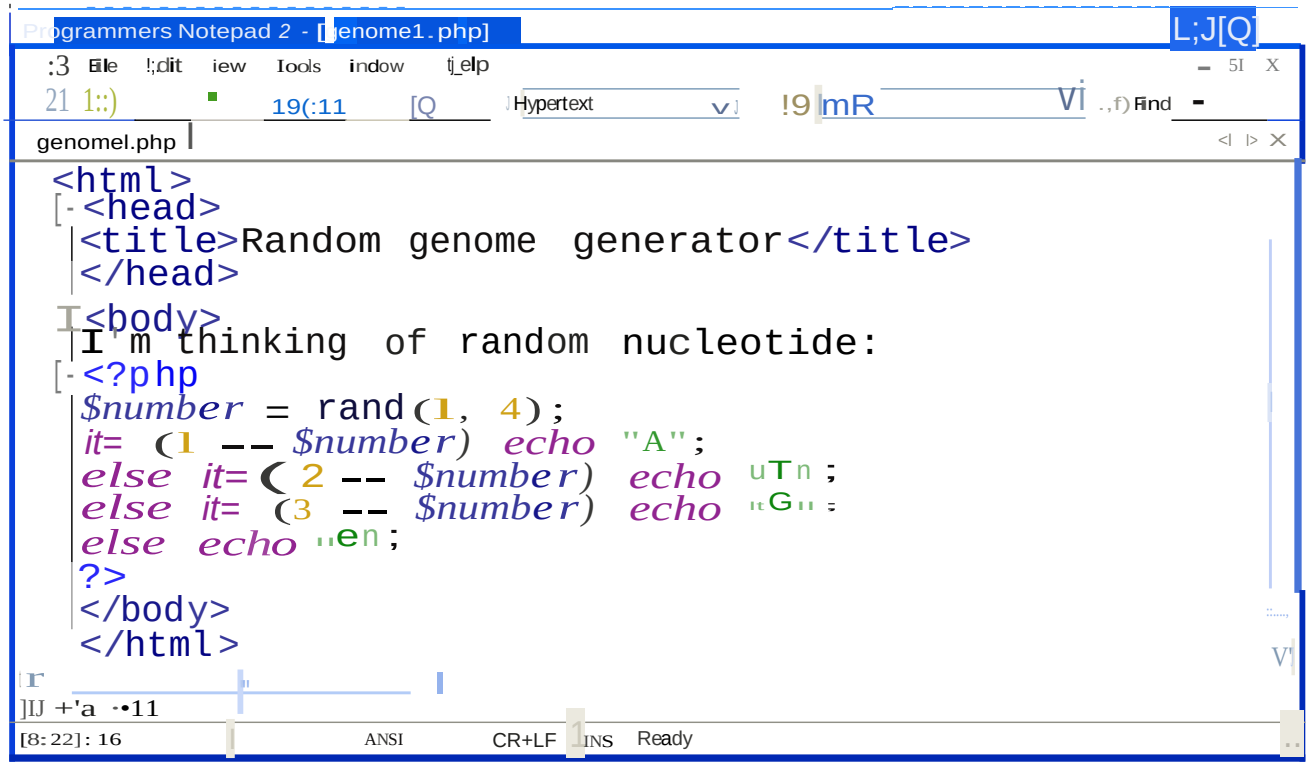
//This is one style of comment

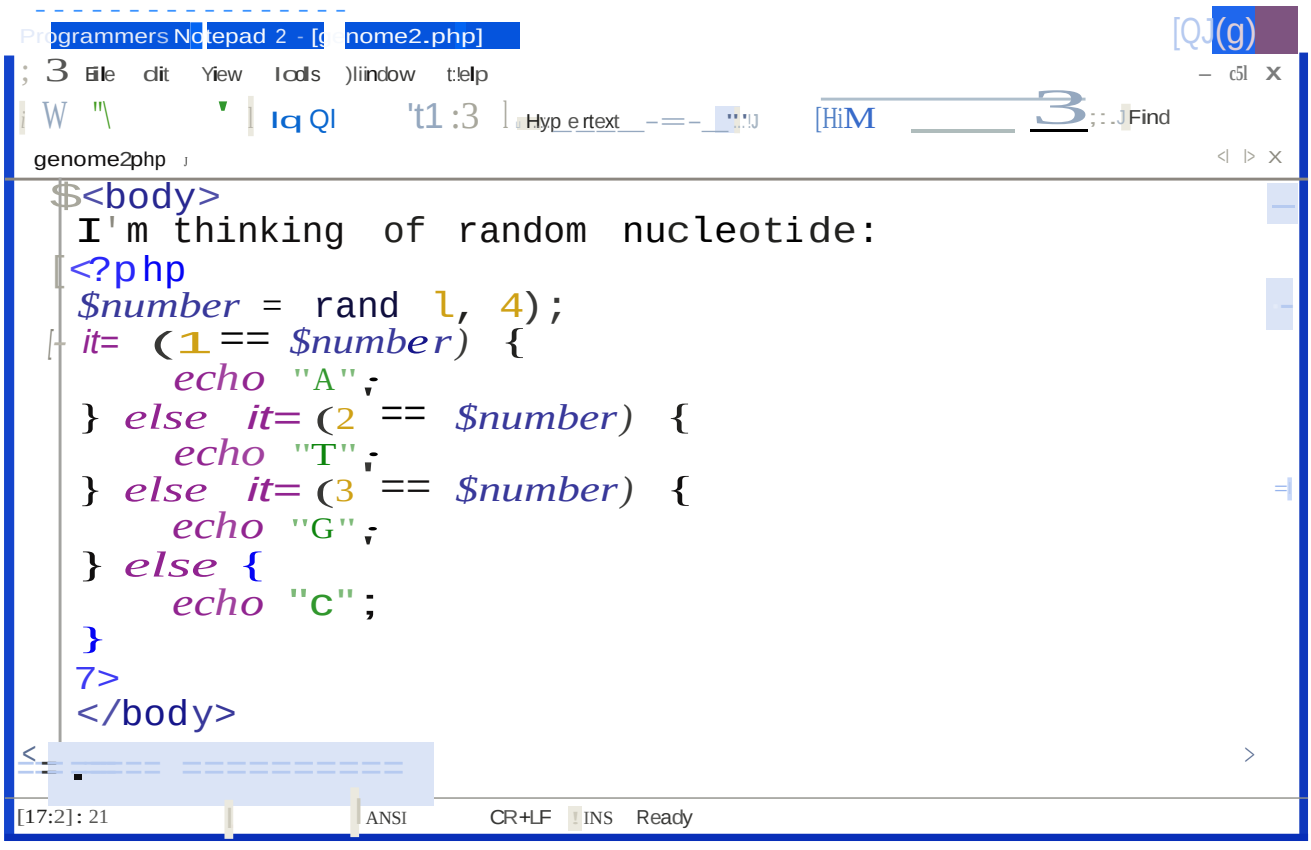
#This is the second style

/*This is my third used for multiple line commenting*/

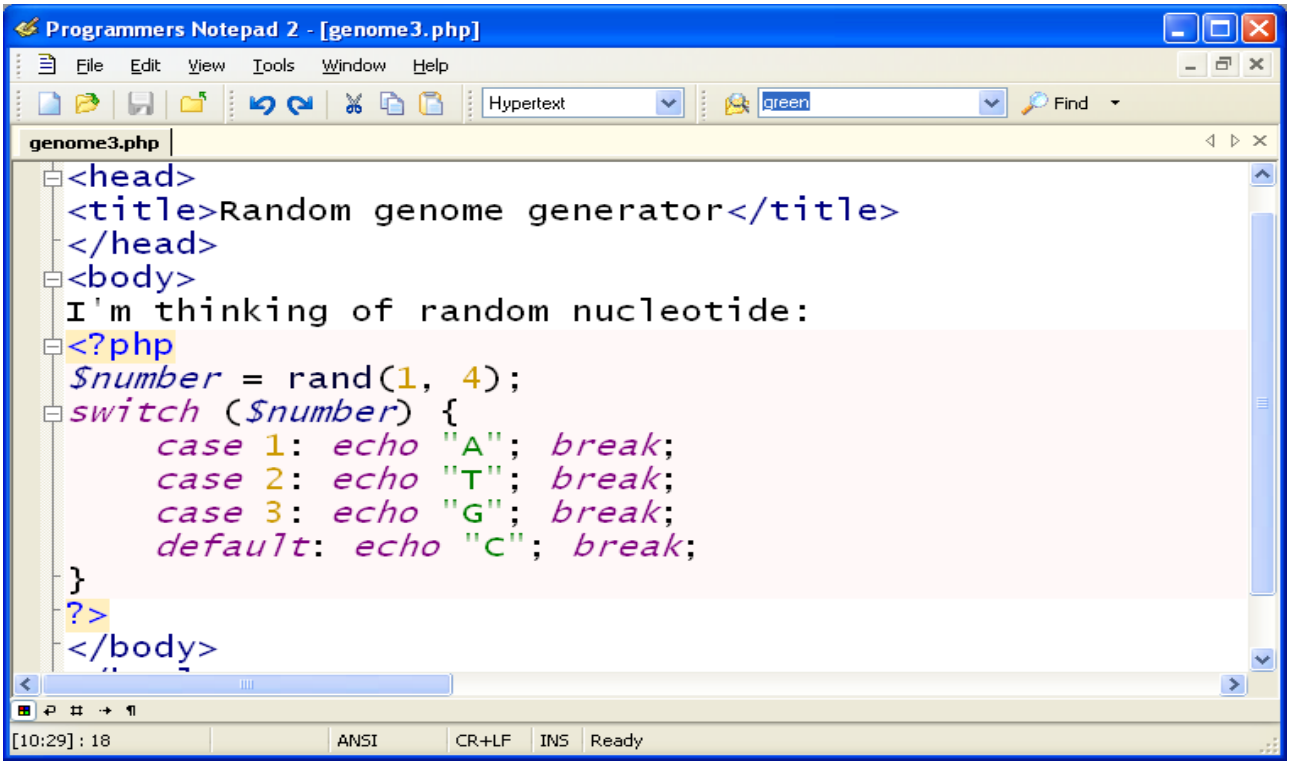
IF/Else Statements

PHP uses a lot familiar syntax,take this random number generator program.



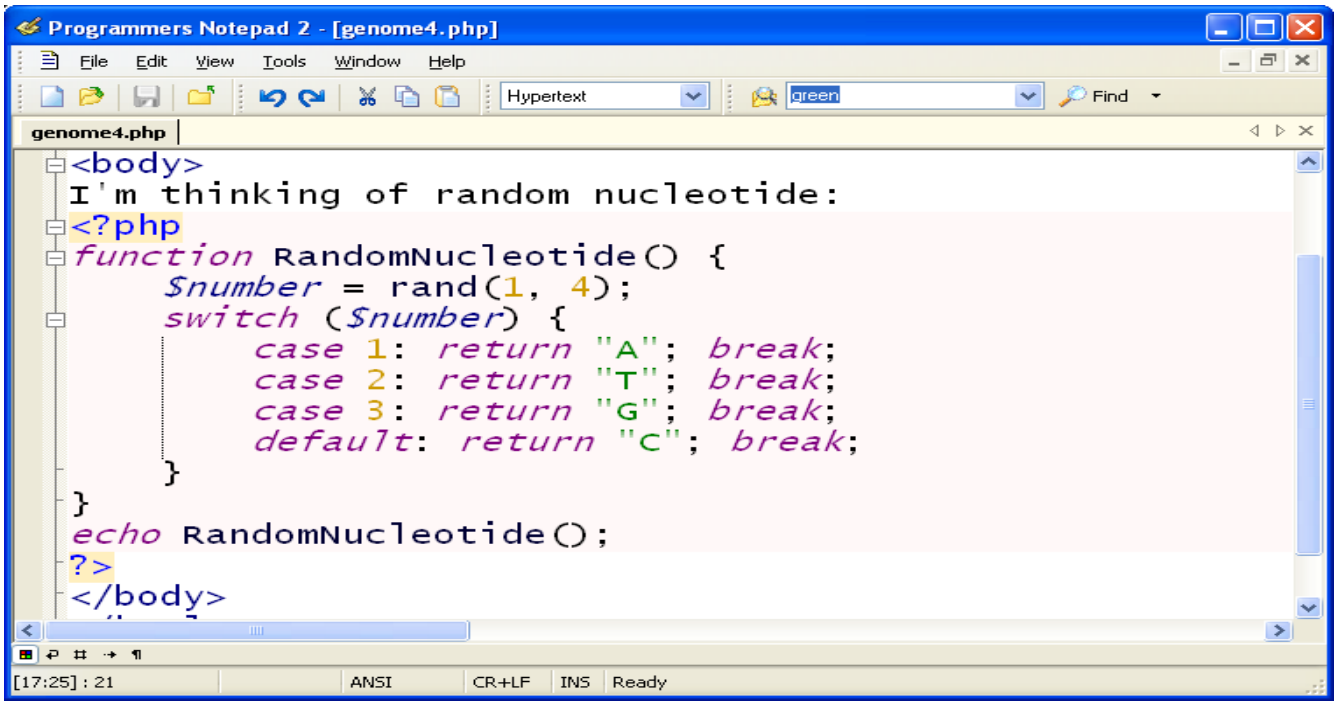


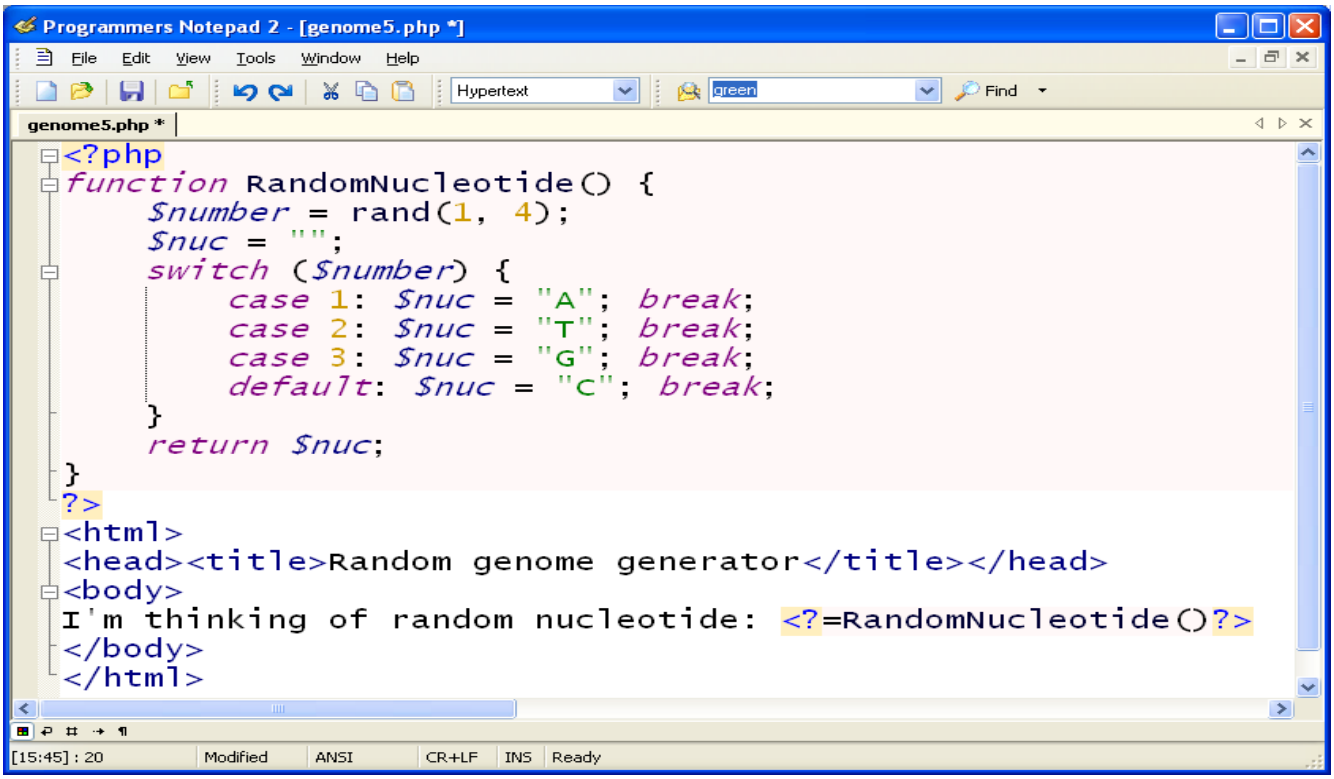
Switch Statements



Functions

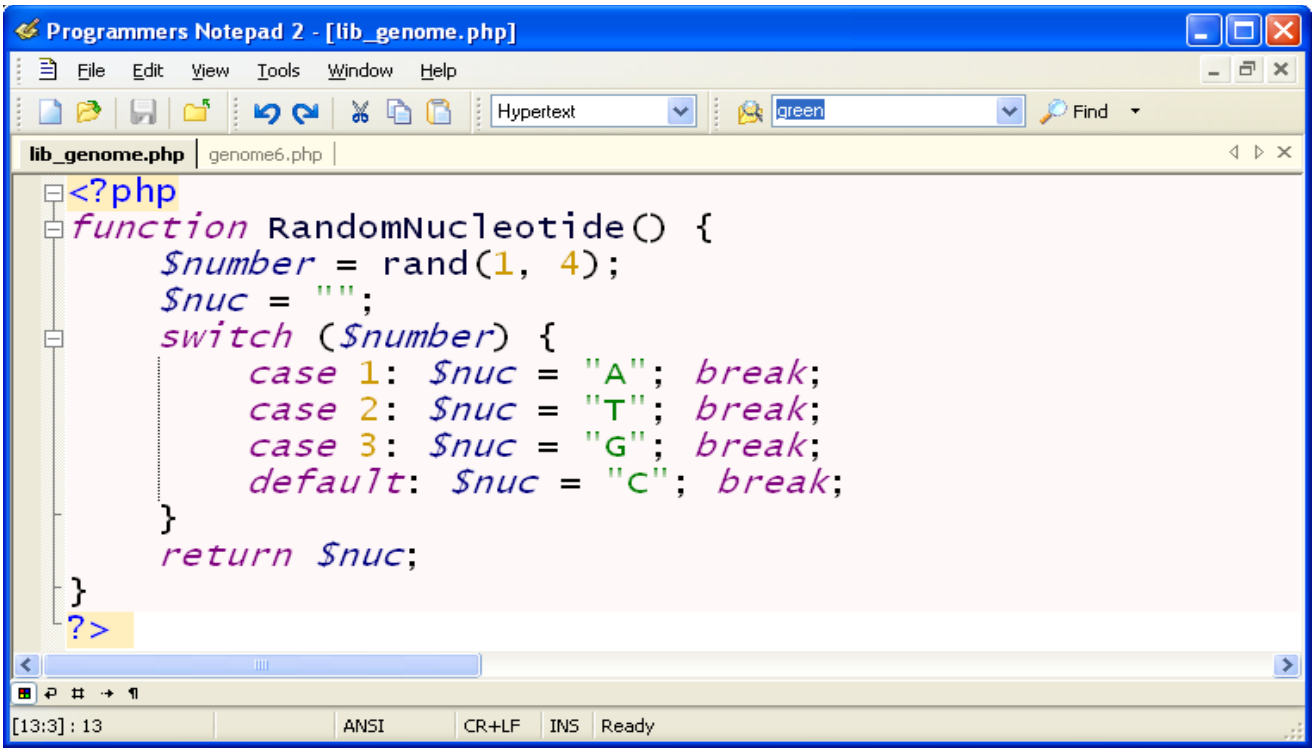
Notice how they next two slides call their functions.



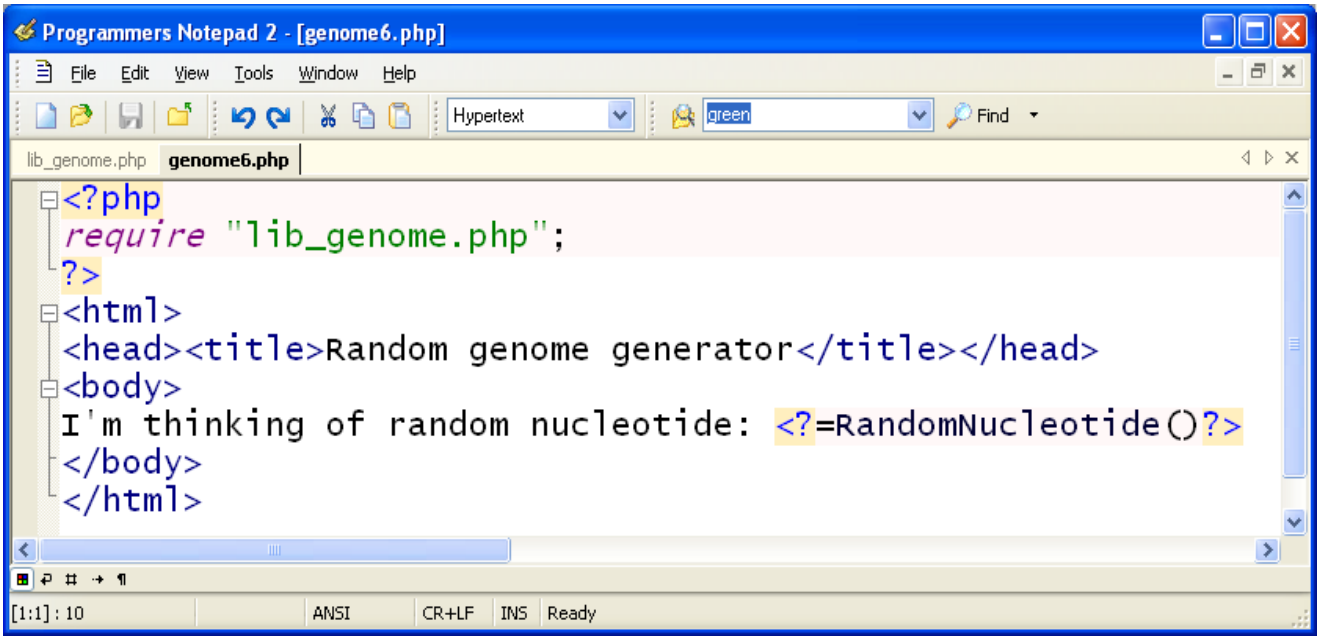


Separating and calling Functions on Different files

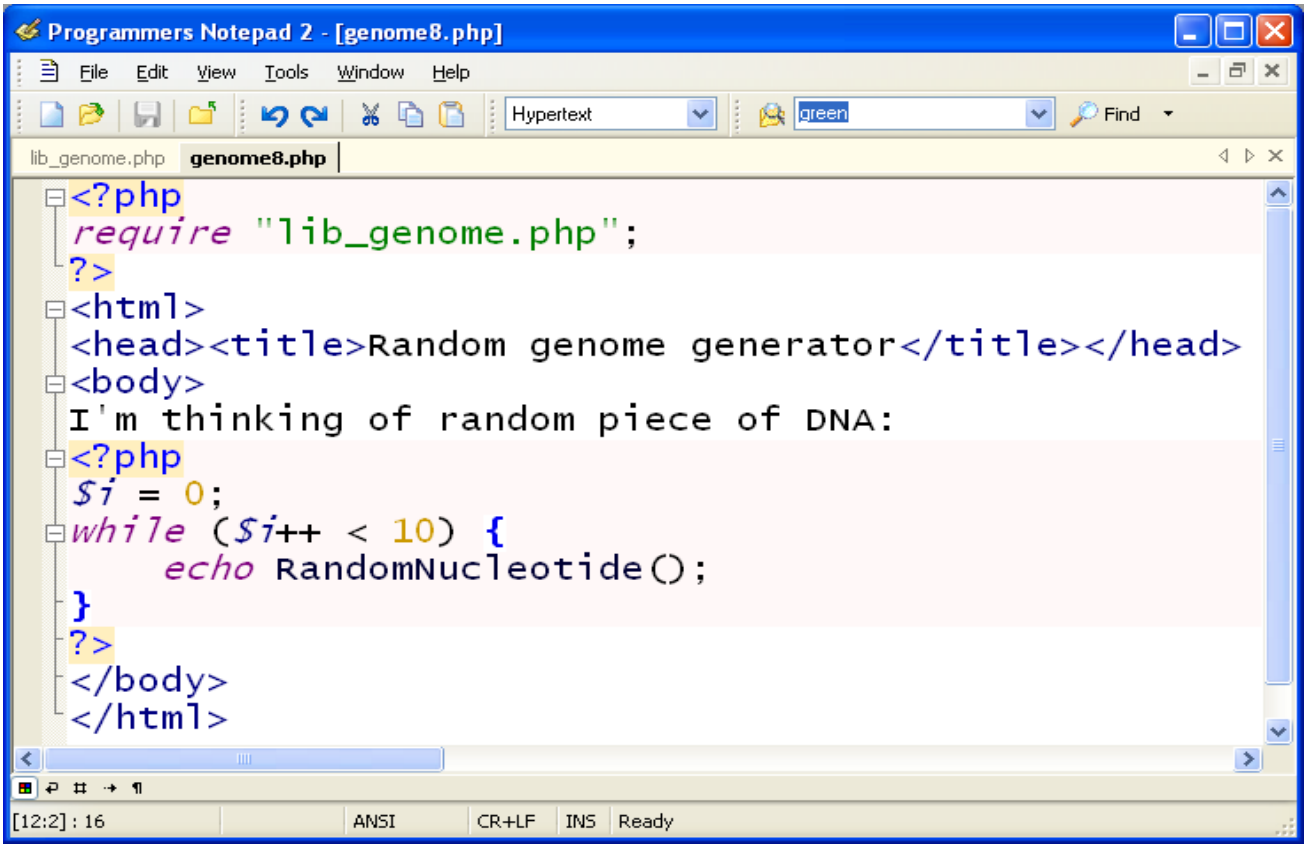
We separate this file and name it lib_genome.php. Notice, it contains no html tags just the php function.



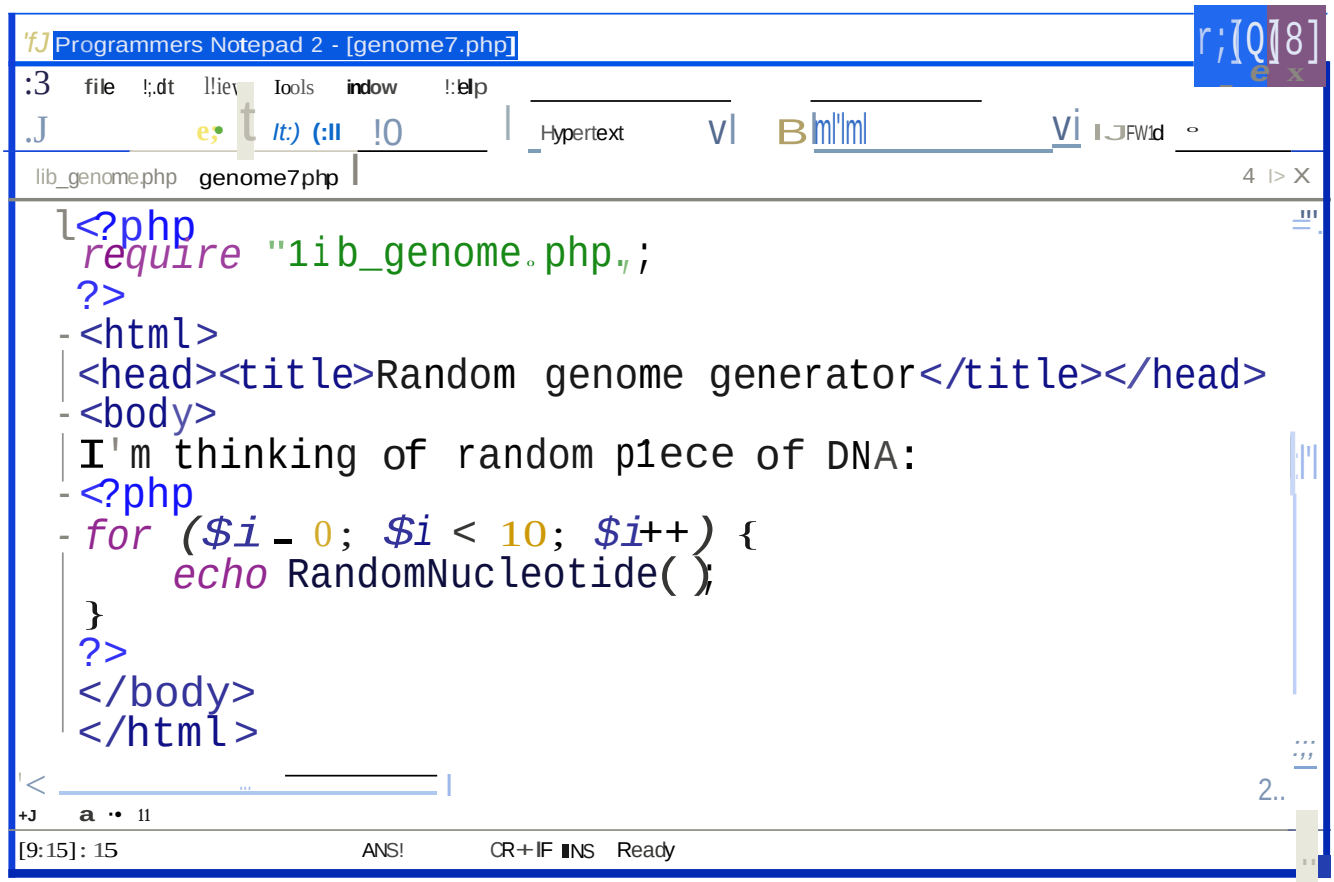
To call lib_genome.php we use require. There are different variation on how to import other php programs. For example, the include command simply takes all the text that exists in the specified file and copies it into the file that uses the include command.



While loops



For loops


Programmers Notepad 2 - [genome7.php]
file
Tools
Hypertext
lib_genome.php
genome7.php
<?php
require "lib_genome.php";
?>
<html>
<head><title>Random genome generator</title></head>
<body>
I'm thinking of random piece of DNA:
<?php
for ($i = 0; $i < 10; $i++) {
echo RandomNucleotide();
}
?>
</body>
</html>
[9:15] : 15
ANSI
CR+LF
INS
Ready