

## Troubleshooting

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## Outline

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- ▶ Assigned Reading
  - ▶ Chapter 18  
"Troubleshooting"

# Finding Errors

custom\_error-rev02.php from Ch 9

```
// create your error handler function
function handler($error_type, $error_message, $error_file, $error_line) {
    switch ($error_type) {
        // fatal error
        case E_ERROR:
            echo "<h1>Fatal Error</h1>";
            die("A fatal error has occurred at line $error_line of file " .
                "$error_file.<br>" .
                "Error message created was "$error_message"");
            break;
        // warnings
        case E_WARNING:
            echo "<h1>Warning</h1>";
            echo "A warning has occurred at line $error_line of file " .
                "$error_file.<br>";
            echo "Error message created was "$error_message"";
        // notices
        case E_NOTICE:
            break; // don't show notice errors
    }
}
// set the error handler to be used
set_error_handler("handler");
```

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# Finding Errors

custom\_error-rev02.php from Ch 9

Instead of



You get

## Warning

A warning has occurred at line 41 of file /home/mweigle/cs418\_html/textbook/code/ch09/custom\_error-rev02.php.  
Error message created was "str\_replace() expects at least 3 parameters, 2 given"

▶ 4

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## Parse Errors

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```
Parse error: parse error, expecting "," or ";"  
in /foo/public_html/forum/index.php on line 25
```

- ▶ Syntax errors, rather than logic errors
  - ▶ *sometimes* easier to find
- ▶ Line number is provided
  - ▶ *sometimes* points to the actual line with the error

## Parse Errors

### Sometimes Line Number is Helpful...

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```
1 <?php  
2 $greeting1 = "aloha";  
3 $greeting2 = "bon jour";  
4 $greeting3 = "hola"  
5 $greeting4 = "good morning";  
6 >?
```

```
Parse error: parse error, unexpected T_VARIABLE  
in in /foo/public_html/forum/error.php on line 5
```

- ▶ Where's the error?
  - ▶ line 5 is seen as a continuation of line 4

## Things to Check

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- ▶ Each line ends with a semicolon
- ▶ All quotes and parentheses are closed
- ▶ All functions and control statements end with curly braces
- ▶ All single and double quotes are properly nested
- ▶ Suggested editors (can color PHP code)
  - ▶ UltraEdit
  - ▶ PHPEdit

## Using Register Globals

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- ▶ Don't forget to preface variable names with proper register global
  - ▶ `$_GET`
  - ▶ `$_POST`
- ▶ GET is the default method for a form. So, if you leave out `method="post"`
  - ▶ the parameters will be passed in the URL string
  - ▶ `$_POST['varname']` won't work

## Clearing Session Variables

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- ▶ Create a logout script
  - ▶ `session_unset()`
- ▶ Close browser and open a new one

## "Headers Already Sent" Error

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```
Warning: Cannot modify header information -  
headers already sent by (output started at  
/foo/public_html/forum/headererror.php:1) in  
/foo/public_html/forum/headererror.php on line 2
```

- ▶ Occurs if you try to set session or cookie *after* sending HTML code to the server
  - ▶ cookie and session lines must go before HTML code
  - ▶ will occur even if you have a trailing/leading space before the first `<?php` line

## Dealing with "Headers Already Sent"

```
<?php
ob_start();
include "top.php"; // contains HTML code
// performs a query to decide the page the user should see

if ($usage < 18) header("location:child.php");
else header("location:adult.php");
ob_end_flush();
?>
```

- ▶ `ob_start()` - buffer all HTML output
- ▶ `ob_end_flush()` - send all buffered output to the browser, turn off buffering
- ▶ Suppresses the "headers already sent" error

## Other General Debugging Tips

- ▶ Use `echo`
  - ▶ print status, variable contents, etc.
  - ▶ use `print_r` for array contents
- ▶ Divide and conquer
  - ▶ write and test small parts of the code
- ▶ Test, test, test!
  - ▶ use different browsers, different systems
  - ▶ think like a hacker
  - ▶ get classmates to help you test - challenge them to break your code

# Demo/Walkthrough Time

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- ▶ Examples from Chapter 10

<https://mweigle418.cs.odu.edu/~mweigle/textbook/ch10.htm>

- ▶ Putting it all together

Up Next:  
Project 2 demos