BCM Developer Test

PHP

The code below is meant to:

- output title and content for 10 posts on page 1, or alternatively the page number specified in the `page` query parameter
- support limiting the posts returned to posts matching the search term from the `s` query parameter
- Replace any instances of `[ad]` in the content with an HTML `div` element that will in turn be replaced with an ad by some Javascript code unrelated to this test

Find the errors in the code below and list them -- assume language level PHP 8 and that this is being run in a WordPress context (e.g. as index.php in a theme)

```php
<?php
$page = $_GET['page'] ?? 1;
$q = WP_Query([
    'posts_per_page' => 10,
    'page' => $page,
    's' => $_GET['s']
]);
?>
<h1>Page <?= $page ?> of <?= $pages ?> : Search for <?= esc_html($_GET['s']) ?>
<?php

while ($q->have_posts()) {
    $q->the_post();
    $content = get_the_content();
    $content = preg_replace_callback('#[ad]#', function() {
        echo '<div class="ad ad-'.$m[1].'"></div>'; # leave for Javascript handler to replace with live ad
    });
    ?>
    <h2><?= esc_html(the_title()) ?></h2>
    <p><?php echo $content ?></p>
    <?php
}
```

WordPress admin

1. A member of the editorial staff is complaining they can't upload images to the WordPress setup. Can you identify at least three (more is OK) likely/common reasons for this issue?

2. What techniques would you use with a WordPress site to make sure it was served in the fastest, most efficient manner possible?

CSS

A new site is being set up. The requirement is for it to contain sections that vary in their placement on the page on mobile and desktop, like this:

Desktop:

A		B
C	D	E
F	G	H

Mobile:

A
D
B
C
G

How do you achieve this with a single HTML and CSS file?
You are not allowed to use any JavaScript.

HTML

Consider the following HTML:

```html
<html><head><title>Example</title></head></html>
<body>
    <h1>Hello, world</h1>
    <p>Cras justo odio, dapibus ac facilisis in, egestas eget quam. Aenean
lacinia bibendum nulla sed consectetur. Aenean eu leo   quam. Pellentesque
ornare sem lacinia quam venenatis vestibulum.   Vivamus sagittis lacus vel
augue laoreet rutrum faucibus dolor
    auctor. Vivamus sagittis lacus vel augue laoreet rutrum faucibus
dolor auctor. Cras mattis consectetur purus sit amet fermentum.
    Morbi leo risus, porta ac consectetur ac, vestibulum at eros</p>

    <p>Integer posuere erat a ante venenatis dapibus posuere velit
aliquet. Etiam porta sem malesuada magna mollis euismod. Nulla  vitae elit
libero, a pharetra augue. Donec sed odio dui. Integer   posuere erat a ante
```

```
venenatis dapibus posuere velit aliquet.</p>


    <p>Duis mollis, est non commodo luctus, nisi erat porttitor
ligula, eget lacinia <a href=https://www.bigcabal.com>        odio sem nec
elit. Sed posuere </a >        consectetur est at <abbr
name="lobortis">lbrt</abbr>. Maecenas faucibus mollis   interdum. Aenean
lacinia <img src=test.jpeg with=300 height=auto> bibendum
nulla sed consectetur.  Praesent <code><b>commodo cursus magna, vel
scelerisque nisl            consectetur et.</code></b></p>
    <button>Hit me</button>
</body>
```

- Find any issues with the above that is not valid HTML 5?
- Mention at least three techniques for this page (any page) that would improve how it would perform in search engines using HTML only

Javascript

Using a corrected version of the above HTML as a starting point, create a Javascript function that adds three new paragraphs each time you hit the button.

These paragraphs should be copies of the three original paragraphs but each time be added in randomised order. They should follow the last paragraph.

Also make it so that an HR element is inserted between every two paragraphs (so P1, P2, HR, P3, P4, HR and so on), including any new ones added by hitting the button. This should apply even before hitting the button the first time.

Finally, without changing the HTML (so in Javascript only), add a new button and make it trigger a function that changes between hiding and showing any paragraphs that contain an image in them.