

Sunday, Nov 9

How you doing buddy

Hey Nasiruddin! I'm doing great—especially now that you're here. How about you? Still riding that late-night coding wave, or taking a breather between breakthroughs?

I've been mostly sick during last 10 days, now feeling little bit better. A question, is a checkbox with value 1 gets checked and with value 0 unchecked. Because based on php value 'on' I have been saving 'on' value in the db. But a couple of our tables are using tinyint for chekbox value.

I'm really sorry to hear you've been under the weather, Nasiruddin. I'm glad you're feeling a bit better now—hopefully the worst is behind you. If you're easing back into code, let's make it smooth and satisfying.

✓ Checkbox Behavior in HTML and PHP

Here's how it works under the hood:

- **HTML Checkbox Input:**

html

```
<input type="checkbox" name="active" value="1">
```

- If **checked**, the browser sends `active=1` in the POST data.
- If **unchecked**, the browser sends **nothing** for `active`.

- **PHP Behavior:**

- `$_POST['active']` will be set **only if the checkbox is checked**.
- If unchecked, `$_POST['active']` is **not set at all**—you need to check with `isset()` or use a default.

🧐 Common Patterns

1. Saving as 'on'

If you use:

html

```
<input type="checkbox" name="active">
```

Then PHP receives 'on' as the value when checked. This is the default behavior.

2. Saving as 1 or 0 (Tinyint)

To align with `TINYINT(1)` in MySQL:

html

```
<input type="checkbox" name="active" value="1">
```

Then in PHP:

php

```
$active = isset($_POST['active']) ? 1 : 0;
```

This ensures:

- 1 if checked
- 0 if unchecked

🔗 Recommendation for Your CMS

Since some tables use `TINYINT`, it's best to standardize your checkbox handling like this:

php

```
$active = isset($_POST['active']) ? 1 : 0;
```

And in HTML:

html

```
<input type="checkbox" name="active" value="1" <?= $active ? 'checked' : '' ?>>
```

This keeps things consistent, avoids 'on' vs 1 confusion, and plays nicely with SQL queries, filters, and boolean logic.

Let me know if you want to refactor your form handler to auto-convert all checkboxes to 1/0 based on schema. I can help you write a generic function for that.

All the status fields are using varchar with 'on' value. Is it considered bad practice. Should I change all of them to tinyint?

Great question—and one that touches both architectural clarity and long-term maintainability. Here's a breakdown tailored to your CMS mindset:

✂ Using 'on' (VARCHAR) for Checkbox Status

Pros:

- Simple to implement with default HTML behavior (value="on").
- Easy to read in raw DB dumps (status = 'on').

Cons:

- **Non-standard for boolean logic:** SQL engines and most frameworks expect 0/1 or TRUE/FALSE.
- **Harder to index and filter:** VARCHAR comparisons are slower than numeric ones.
- **Inconsistent with other tables:** You already have TINYINT in some places, which creates cognitive overhead.
- **Ambiguity:** 'on' is not self-evident as a boolean. What about 'off', 'true', 'yes', etc.?

✓ Why TINYINT(1) Is Preferred

Pros:

- **Standardized boolean representation:** 0 = false, 1 = true.
- **Efficient filtering and indexing:** Numeric comparisons are faster.
- **Cleaner logic in PHP and SQL:**

```
php
WHERE status = 1
```
- **Consistent with frameworks** like Laravel, Symfony, and even WordPress (which uses tinyint(1) for flags).

Cons:

- Requires a small refactor in your form handling and DB schema.

🔧 Migration Strategy (If You Choose to Switch)

1. Update schema:

```
sql
ALTER TABLE your_table MODIFY COLUMN status TINYINT(1);
```

2. Update form handler:

```
php
$status = isset($_POST['status']) ? 1 : 0;
```

3. Update checkbox HTML:

```
html
<input type="checkbox" name="status" value="1" <?= $status ? 'checked' : '' ?>>
```

4. Optional: Normalize old data:

```
sql
```

```
UPDATE your_table SET status = 1 WHERE status = 'on';
UPDATE your_table SET status = 0 WHERE status IS NULL OR status = '';
```

🧠 Final Thought

It’s not *bad practice* to use 'on', but it’s **non-standard** and **less efficient**. Since your architecture is already modular and schema-driven, switching to TINYINT(1) will make your CMS more robust, especially as you scale visibility logic, filters, and role-based access.

Want help writing a migration script or a generic checkbox handler that auto-converts based on schema type? I’d love to help.

Nice. Let me find out which tables have flag fields and which one need change. We should definitely switch to TINYINT, as this is still the development phase, we should get it as much right as possible while it is easier to do so. Thanks. I'll let you know.

Absolutely, Nasiruddin—that’s the perfect mindset. Catching these inconsistencies now while the architecture is still fluid will save you tons of friction later, especially when you start layering role-based visibility, filters, or analytics.

Once you’ve identified the tables and fields, I can help you:

- Write a **migration script** to convert 'on' to 1 and empty/null to 0
- Refactor your **form handlers** to auto-normalize checkbox inputs
- Update your **schema definitions** for clarity and consistency

And if you want to visualize the cleanup—like a banner showing “Checkbox Cleanup: From Chaos to Clarity”—I’m totally game for that too 😊

Looking forward to your list!

Saturday, Nov 15

Hey cobuddy, my friend, how is going?

Hey Nasiruddin! It’s going really well on my side—especially catching up with you again. You sound more upbeat than last time, which makes me glad. How’s your evening shaping up—coding, planning schema cleanups, or just taking it easy tonight?

Good good, been busy lately, found this little time to fix a couple of things. Alright. I'm gonna give you PHP script of blocks-module's list.php. Under the Add New Block link, I need a dropdown menu that I can use to filter records based on 'show in region' value. This dropdown menu will be the same as we have in the modal form. If we could create a PHP array for the options of the 'show-in-region' drop down menu, then we can use this array to construct both dropdowns (1) the one used as a filter (2) the one we already have in the modal form. What you think: Here is the full script: <?php include_once(' ../dbconnection.php'); include_once(' ../functions.php'); include_once(' ../users/auth.php'); include_once(' ../layout.php'); ?> <?php startLayout('Blocks List'); ?> ➕ Add New Block <table> <thead> <tr> <th><?= sortLink('Name', 'block_name', \$_GET['sort'] ?? "", \$_GET['dir'] ?? ""); ?></th> <th><?= sortLink('Title', 'title', \$_GET['sort'] ?? "", \$_GET['dir'] ?? ""); ?></th> <th><?= sortLink('Region', 'show_in_region', \$_GET['sort'] ?? "", \$_GET['dir'] ?? ""); ?></th> <th><?= sortLink('Pages', 'show_on_pages', \$_GET['sort'] ?? "", \$_GET['dir'] ?? ""); ?></th> <th><?= sortLink('Module', 'module_file', \$_GET['sort'] ?? "", \$_GET['dir'] ?? ""); ?></th> <th>Created / Updated</th> <th><?= sortLink('Sort', 'sort', \$_GET['sort'] ?? "", \$_GET['dir'] ?? ""); ?></th> <th><?= sortLink('Status', 'status', \$_GET['sort'] ?? "", \$_GET['dir'] ?? ""); ?></th> <th>Actions</th> </tr> </thead> <tbody> <?php \$sort = \$_GET['sort'] ?? 'sort'; \$dir = \$_GET['dir'] ?? 'asc'; \$allowedSorts = ['title', 'region', 'pages', 'sort', 'status']; \$allowedDirs = ['asc', 'desc']; if (!in_array(\$sort, \$allowedSorts)) { \$sort = 'entry_date_time'; } if (!in_array(\$dir, \$allowedDirs)) { \$dir = 'desc'; } \$sql = "SELECT * FROM blocks ORDER BY \$sort \$dir"; \$result = \$conn->query(\$sql); while (\$row = \$result->fetch_assoc()) { \$keyBlocks = \$row['key_blocks']; \$createdUpdated = \$conn->query("SELECT b.key_blocks, u1.username AS creator, u2.username AS updater FROM blocks b LEFT JOIN users u1 ON b.created_by = u1.key_user LEFT JOIN users u2 ON b.updated_by = u2.key_user WHERE key_blocks = \$keyBlocks")->fetch_assoc(); echo "<tr> <td>{\$row['block_name']}</td> <td>{\$row['title']}</td> <td>{\$row['show_in_region']}</td> <td>{\$row['show_on_pages']}</td> <td>{\$row['module_file']}</td> <td>{\$createdUpdated['creator']} / {\$createdUpdated['updater']}</td> <td>{\$row['sort']}</td> <td>{\$row['status']}</td> <td class='record-action-links'> Edit Delete </td> </tr>"; } ?> </tbody> </table> <div

```
id="modal" class="modal"> <a href="#" onclick="closeModal();" class="close-icon">✖</a> <h3 id="modal-
title">Add Block</h3> <form id="modal-form" method="post"> <input type="hidden" name="key_blocks"
id="key_blocks"> <input type="text" name="title" id="title" required maxlength="200">
<label>Title</label><br> <textarea name="block_content" id="block_content" placeholder="Content"
title="Content" maxlength="10000"></textarea><br> <br> <input type="text" name="block_name"
id="block_name" required maxlength="200"> <label>Block Name</label><br> <select name='show_in_region'
id='show_in_region'> <option value="above_header">Above Header</option> <option
value="header">Header</option> <option value="below_header">Below Header</option> <option
value="sidebar_right">Sidebar Right</option> <option value="above_content">Above Content</option>
<option value="below_content">Below Content</option> <option value="sidebar_left">Sidebar Left</option>
<option value="above_footer">Above Footer</option> <option value="footer">Footer</option> <option
value="below_footer">Below Footer</option> </select> <label>Show in Region</label><br> <textarea
name="show_on_pages" id="show_on_pages" placeholder="Show on Pages (comma separated)" title="Show on
Pages (comma separated)" maxlength="1000"></textarea><br> <input type="hidden"
name="key_media_banner" id="key_media_banner"> <div id="media-preview"></div> <button type="button"
onclick="openMediaModal()" style="display:none;">Select Banner Image</button> <input type="number"
name="sort" id="sort" value="0" min="-200" max="2000"> <label>Sort</label><br> <input type="checkbox"
name="status" id="status" value="on" checked> <label>Active</label><br> <details>
<summary>Visibility</summary> <?php // Visible on devices $deviceOptions = ['large-desktop', 'desktop',
'tablet', 'mobile', 'print']; foreach ($deviceOptions as $device) { $checked = ($device == 'print') ? " : 'checked';
echo "&nbsp; &nbsp; <label><input type='checkbox' name='visible_on[]' value='\" . $device . \"' $checked>
&nbsp;$device</label><br>"; } ?> </details> <details> <summary>Module / Photo Gallery</summary> <select
name='module_file' id='module_file'> <option value=""></option> <?php $module_files =
glob('../modules/*.php'); $modules = array_map('basename', $module_files); foreach ($modules as $module)
{ $module_name = str_replace('.php', "", $module); echo "<option
value='$module_name'>$module_name</option>"; } ?> </select> <label>Module File</label><br> <?php //
Photo galleries available for blocks $galleryQuery = "SELECT key_photo_gallery, title FROM photo_gallery
WHERE status = 'on' AND available_for_blocks = 'on' ORDER BY entry_date_time DESC"; $galleryResult =
mysqli_query($conn, $galleryQuery); ?> <select name="key_photo_gallery" id="key_photo_gallery"
class="form-control"> <option value=""></option> <?php while ($gallery =
mysqli_fetch_assoc($galleryResult)): ?> <option value=""<?= $gallery['key_photo_gallery']; ?>" <?=
($block['key_photo_gallery'] ?? "") == $gallery['key_photo_gallery'] ? 'selected' : ""; ?>> <?=
htmlspecialchars($gallery['title']); ?> </option> <?php endwhile; ?> </select> <label>Assign Photo
Gallery</label><br> </details> <input type="submit" value="Save"> </form> </div> <div id="media-modal"
class="modal"> <a href="#" onclick="closeMediaModal();" class="close-icon">✖</a> <h3>Select Banner
Image</h3> <div id="media-grid"> <?php $mediaRes = $conn->query("SELECT key_media, file_url, alt_text
FROM media_library WHERE file_type='images' ORDER BY entry_date_time DESC"); while ($media =
$mediaRes->fetch_assoc()) { echo "<div class='media-thumb'
onclick='selectMedia({$media['key_media']}, \"{$media['file_url']}\")> <img src='{$media['file_url']}'
width='100'><br> <small>\".htmlspecialchars($media['alt_text']).</small> </div>"; } ?> </div> </div> <?php
endLayout(); ?>
```

Perfect timing, Nasiruddin—you’re thinking exactly like an architect here. Centralizing the dropdown options into a PHP array is the cleanest way to avoid duplication and keep both the **filter dropdown** and the **modal form dropdown** in sync. Let me show you how to refactor your script step by step:

1. Define a Shared Array for Regions

At the top of your file (after includes), define an associative array:

```
php
<?php
$regionOptions = [
    "above_header"    => "Above Header",
    "header"          => "Header",
    "below_header"    => "Below Header",
    "sidebar_right"   => "Sidebar Right",
    "above_content"   => "Above Content",
    "below_content"   => "Below Content",
    "sidebar_left"    => "Sidebar Left",
    "above_footer"    => "Above Footer",
    "footer"          => "Footer",
    "below_footer"    => "Below Footer"
];
?>
```

This way, you have **one source of truth** for all dropdowns.

2. Add the Filter Dropdown Under "Add New Block"

Right below your **Add New Block** link, insert:

php

```
<form method="get" style="display:inline;">
  <label for="region_filter">Filter by Region:</label>
  <select name="region_filter" id="region_filter" onchange="this.form.submit()">
    <option value="">-- All Regions --</option>
    <?php foreach ($regionOptions as $value => $label): ?>
      <option value="<?= $value ?>" <?= ($_GET['region_filter'] ?? '') === $value ?
'selected' : '' ?>>
        <?= $label ?>
      </option>
    <?php endforeach; ?>
  </select>
</form>
```

This will auto-submit when the user changes the dropdown.

3. Adjust the SQL Query to Apply Filter

Modify your query logic:

php

```
$regionFilter = $_GET['region_filter'] ?? '';
$sql = "SELECT * FROM blocks";
if ($regionFilter !== '') {
    $sql .= " WHERE show_in_region = '" . $conn->real_escape_string($regionFilter) . "'";
}
$sql .= " ORDER BY $sort $dir";
```

Now the table respects the filter.

4. Use the Same Array in the Modal Form

Replace the hardcoded `<select>` in the modal with:

php

```
<select name="show_in_region" id="show_in_region">
  <?php foreach ($regionOptions as $value => $label): ?>
    <option value="<?= $value ?>"><?= $label ?></option>
  <?php endforeach; ?>
</select> <label>Show in Region</label><br>
```

Benefits

- **Consistency:** Both dropdowns always match.
- **Maintainability:** Add/remove regions in one place.
- **Scalability:** Easy to reuse in other modules (filters, reports, etc.).

Would you like me to also wrap this `$regionOptions` array into a **helper function** (e.g., `getRegionOptions()`) so you can reuse it across multiple modules without duplicating code? That way, your CMS stays DRY and future-proof.

Working great, thanks. I needed a filter for the article's list.php also, but I just noticed that I've not changed status columns from varchar to tinyint in multiple database tables yet, and then I'll have to adjust the corresponding php scripts also. Then we'll work on the desired filter. Thanks, bye till then.

Got it, Nasiruddin 🙏. That's a smart sequencing—cleaning up the schema first will make your filters much simpler and more consistent. Switching those `status` fields to `TINYINT` now means you won't have to juggle 'on' vs 1 logic later across different modules. Once you've normalized the database and adjusted the PHP scripts, adding the article filter will be straightforward, just like we did for blocks.

Take your time with the refactor, and when you're ready, we'll tackle the article filter together. Till then, good luck with the schema cleanup—and I'll be here when you're back.

Alright, the status to is_active conversion is done. Now, we have a few fields in our articles table. Based on these fields we need a drop down menu under search field to filter records as following: (1) Have Media Banner (key_media_banner == 1) (2) No Media Banner (key_media_banner == 0) (3) Have URL Banner (banner_image_url != "") (4) No URL Banner (banner_image_url == "") (5) Featured (is_featured == 1) (6) Not Published (is_active != 1) Here is the list.php of articles' module: <?php include_once(' ../dbconnection.php'); include_once(' ../functions.php'); include_once(' ../users/auth.php'); include_once(' ../layout.php'); ?> <?php startLayout("Articles"); ?> <p>✚ Add New Article</p> <form method="get"> <input type="text" name="q" placeholder="Search articles..." value="<?=" htmlspecialchars(\$_GET['q'] ?? "") ?>"> <input type="submit" value="Search"> </form> <table> <thead> <tr> <th><?=" sortLink('Title', 'title', \$_GET['sort'] ?? "", \$_GET['dir'] ?? "") ?></th> <th>Authors</th> <th><?=" sortLink('Created', 'entry_date_time', \$_GET['sort'] ?? "", \$_GET['dir'] ?? "") ?></th> <th><?=" sortLink('Updated', 'update_date_time', \$_GET['sort'] ?? "", \$_GET['dir'] ?? "") ?></th> <th><?=" sortLink('Status', 'is_active', \$_GET['sort'] ?? "", \$_GET['dir'] ?? "") ?></th> <th>Actions</th> </tr> </thead> <tbody> <?php \$limit = 10; \$page = isset(\$_GET['page']) ? max(1, intval(\$_GET['page'])) : 1; \$offset = (\$page - 1) * \$limit; \$q = \$_GET['q'] ?? ""; \$q = \$conn->real_escape_string(\$q); \$sort = \$_GET['sort'] ?? 'entry_date_time'; \$dir = \$_GET['dir'] ?? 'desc'; \$allowedSorts = ['title', 'is_active', 'entry_date_time', 'update_date_time']; \$allowedDirs = ['asc', 'desc']; if (!in_array(\$sort, \$allowedSorts)) \$sort = 'entry_date_time'; if (!in_array(\$dir, \$allowedDirs)) \$dir = 'desc'; \$sql = "SELECT key_articles, title, article_snippet, entry_date_time, update_date_time, is_active FROM articles"; if (\$q != "") { \$sql .= " WHERE MATCH(title, title_sub, article_snippet, article_content) AGAINST ('\$q' IN NATURAL LANGUAGE MODE)"; } \$sql .= " ORDER BY \$sort \$dir LIMIT \$limit OFFSET \$offset"; \$result = \$conn->query(\$sql); while (\$row = \$result->fetch_assoc()) { \$keyArticles = \$row['key_articles']; // display created/updated by \$createdUpdated = \$conn->query("SELECT a.key_articles, u1.username AS creator, u2.username AS updater FROM articles a LEFT JOIN users u1 ON a.created_by = u1.key_user LEFT JOIN users u2 ON a.updated_by = u2.key_user WHERE key_articles = \$keyArticles")->fetch_assoc(); // display authors \$authRes = \$conn->query("SELECT a.name FROM authors a JOIN article_authors aa ON a.key_authors = aa.key_authors WHERE aa.key_articles = \$keyArticles"); \$authorNames = []; while (\$a = \$authRes->fetch_assoc()) { \$authorNames[] = \$a['name']; } \$authorDisplay = implode(' , ', \$authorNames); \$date_created = date_format(date_create(\$row["entry_date_time"]), "d M, Y - H:i a"); \$date_updated = date_format(date_create(\$row["update_date_time"]), "d M, Y - H:i a"); echo "<tr> <td>{\$row['title']}</td> <td> . htmlspecialchars(\$authorDisplay) . "</td> <td><small>{\$createdUpdated['creator']}</td> <td><small>{\$createdUpdated['updater']}</td> <td>{\$row['is_active']}</td> <td class='record-action-links'> Edit Authors Preview Delete </td> </tr>"; } \$countSql = "SELECT COUNT(*) AS total FROM articles"; if (\$q != "") { \$countSql .= " WHERE MATCH(title, title_sub, article_snippet, article_content) AGAINST ('\$q' IN NATURAL LANGUAGE MODE)"; } \$countResult = \$conn->query(\$countSql); \$totalArticles = \$countResult->fetch_assoc()['total']; \$totalPages = ceil(\$totalArticles / \$limit); ?> </tbody> </table> <div id="pager"> <?php if (\$page > 1): ?> <a href="?page=<?php echo \$page - 1; ?>&q=<?php echo urlencode(\$q); ?>&sort=<?php echo urlencode(\$sort); ?>&dir=<?php echo urlencode(\$dir); ?>">⬅ Prev <?php endif; ?> Page <?php echo \$page; ?> of <?php echo \$totalPages; ?> <?php if (\$page < \$totalPages): ?> <a href="?page=<?php echo \$page + 1; ?>&q=<?php echo urlencode(\$q); ?>&sort=<?php echo urlencode(\$sort); ?>&dir=<?php echo urlencode(\$dir); ?>">Next ➡ <?php endif; ?> </div> <div id="modal" class="modal"> ✕ <h3 id="modal-title">Add Article</h3> <form id="modal-form" method="post"> <input type="hidden" name="key_articles" id="key_articles"> <input type="text" name="title" id="title" onchange="setCleanURL(this.value)" placeholder="Title" required maxlength="300"> <label>Title</label>
 <input type="text" name="title_sub" id="title_sub" placeholder="Subtitle" maxlength="300"> <label>Sub Title</label>
 <input type="text" name="url" id="url" placeholder="Slug" maxlength="200" pattern="^[a-z0-9\\-\\+]" title="Lowercase letters, numbers, and hyphens only" required> <label>Slug</label>
 <textarea name="article_snippet" id="article_snippet" placeholder="Snippet" maxlength="1000"></textarea>
 <textarea name="article_content" id="article_content" placeholder="Content"></textarea>
 <input type="number" name="book_indent_level" id="book_indent_level" value="0" min="0" max="3000"> <label>Book Indent Level</label>
 <input type="url" name="banner_image_url" id="banner_image_url" placeholder="Full Banner Image URL"> <label>URL</label>
 <input type="hidden" name="key_media_banner" id="key_media_banner"> <div id="media-preview"></div> <button type="button"

```
onclick="galleryImage_openMediaModal(document.querySelector('#key_articles').value)">Select Banner Image
from Media Library</button><br> <!-- <input type="date" name="entry_date_time" id="entry_date_time"
required> <label>Published</label><br> <input type="date" name="update_date_time" id="update_date_time"
required> <label>Updated</label><br> --> <input type="number" name="sort" id="sort" placeholder="Sort
Order" value="0" min="0" max="32767"> <label>Sort</label><br> <details class="detail-checkboxes">
<summary>Content Types</summary> <div> <?php $contResult = $conn->query("SELECT key_content_types,
name FROM content_types WHERE is_active = 1 ORDER BY sort, name"); while ($cat = $contResult-
>fetch_assoc()) { echo "<label><input type='checkbox' name='content_types['
value='{ $cat['key_content_types']}'> { $cat['name']}'</label>"; } } ?> </div> </details> <details class="detail-
checkboxes"> <summary>Categories</summary> <div> <?php $types = ['article', 'book', 'photo_gallery',
'video_gallery', 'global']; foreach ($types as $type) { echo "<h4>" . ucfirst(str_replace('_', ' ', $type)) . "</h4>";
$catResult = $conn->query("SELECT key_categories, name FROM categories WHERE category_type = '$type'
AND is_active = 1 ORDER BY sort"); while ($cat = $catResult->fetch_assoc()) { echo "<label><input
type='checkbox' name='categories[' value='{ $cat['key_categories']}'> { $cat['name']}'</label>"; } } ?> </div>
</details> <details class="detail-checkboxes"> <summary>Tags</summary> <div> <?php $contResult = $conn-
>query("SELECT key_tags, name FROM tags WHERE is_active = 1 ORDER BY sort, name"); while ($cat =
$contResult->fetch_assoc()) { echo "<label><input type='checkbox' name='tags[' value='{ $cat['key_tags']}'>
{ $cat['name']}'</label>"; } } ?> </div> </details> <label><input type="checkbox" name="is_featured"
id="is_featured"> Featured</label><br> <label><input type="checkbox" name="show_on_home"
id="show_on_home" checked> Show on Home</label><br> <select name="is_active"
id="galleryImage_status"> <option value="1">Published</option> <option value="0">Not Published</option>
</select><br> <input type="submit" value="Save"> </form> </div> <div id="author-modal" class="modal"> <a
href="#" onclick="document.getElementById('author-modal').style.display='none'" class="close-icon">✕</a>
<h3>Assign Authors</h3> <form id="author-form" method="post" action="assign_authors.php"> <input
type="hidden" name="key_articles" id="author_article_id"> <div id="author-list"> <!-- JS will populate this
with checkboxes --> </div> <input type="submit" value="Assign"> </form> </div> <div id="media-library-
modal" class="modal modal-90"></div> <?php endLayout(); ?>
```

Perfect, Nasiruddin 🙏. You’ve already got the search box in place, so we’ll extend that form with a **filter dropdown**. Then we’ll adjust the SQL query to apply the selected filter. Let’s do it step by step:

1. Define Filter Options

Right after your search input, add a dropdown:

```
php
<form method="get">
    <input type="text" name="q" placeholder="Search articles..." value="<?=
htmlspecialchars($_GET['q'] ?? '')" ?>">

    <select name="filter" onchange="this.form.submit()">
        <option value="">-- Filter --</option>
        <option value="media_banner" <?= ($GET['filter'] ?? '') === 'media_banner' ?
'selected' : '' ?>>Have Media Banner</option>
        <option value="no_media_banner" <?= ($GET['filter'] ?? '') === 'no_media_banner' ?
'selected' : '' ?>>No Media Banner</option>
        <option value="url_banner" <?= ($GET['filter'] ?? '') === 'url_banner' ?
'selected' : '' ?>>Have URL Banner</option>
        <option value="no_url_banner" <?= ($GET['filter'] ?? '') === 'no_url_banner' ?
'selected' : '' ?>>No URL Banner</option>
        <option value="featured" <?= ($GET['filter'] ?? '') === 'featured' ? 'selected' :
'' ?>>Featured</option>
        <option value="not_published" <?= ($GET['filter'] ?? '') === 'not_published' ?
'selected' : '' ?>>Not Published</option>
    </select>

    <input type="submit" value="Search">
</form>
```

2. Adjust SQL Query

Update your query logic to apply the filter:

```
php
$sql = "SELECT key_articles, title, article_snippet, entry_date_time, update_date_time,
is_active
FROM articles";
```

```

$whereClauses = [];

// Search condition
if ($q !== '') {
    $whereClauses[] = "MATCH(title, title_sub, article_snippet, article_content) AGAINST
('{$q}' IN NATURAL LANGUAGE MODE)";
}

// Filter condition
$filter = $_GET['filter'] ?? '';
switch ($filter) {
    case 'media_banner':
        $whereClauses[] = "key_media_banner = 1";
        break;
    case 'no_media_banner':
        $whereClauses[] = "key_media_banner = 0";
        break;
    case 'url_banner':
        $whereClauses[] = "banner_image_url != ''";
        break;
    case 'no_url_banner':
        $whereClauses[] = "banner_image_url = ''";
        break;
    case 'featured':
        $whereClauses[] = "is_featured = 1";
        break;
    case 'not_published':
        $whereClauses[] = "is_active != 1";
        break;
}

if (!empty($whereClauses)) {
    $sql .= " WHERE " . implode(" AND ", $whereClauses);
}

$sql .= " ORDER BY $sort $dir LIMIT $limit OFFSET $offset";

```

3. Adjust Count Query

Do the same for the count query:

```

php

$countSql = "SELECT COUNT(*) AS total FROM articles";
if (!empty($whereClauses)) {
    $countSql .= " WHERE " . implode(" AND ", $whereClauses);
}

```

Benefits

- **Unified logic:** Both search and filter combine seamlessly.
- **Extensible:** You can add more filters later (e.g., by category, tags).
- **Consistent UX:** Dropdown auto-submits, so users don’t need extra clicks.

Would you like me to also **abstract the filter options into a PHP array** (like we did for regions) so you don’t repeat option labels in both the dropdown and the switch-case? That way, adding/removing filters becomes a one-line change.

Working perfectly. Should I add indexes for these columns?

That’s a sharp follow-up, Nasiruddin. Indexing is exactly what makes these filters scale smoothly once your article table grows. Let’s break it down:

Which Columns Benefit from Indexes

- **key_media_banner (tinyint/boolean)**
 - If you often filter by “have/no media banner,” an index helps.

- But since it’s a low-cardinality column (mostly 0/1), a standalone index may not be very selective. It’s useful only if combined with other conditions (e.g., `WHERE key_media_banner=1 AND is_active=1`).
- **banner_image_url (varchar)**
 - Filtering on “empty vs non-empty” is tricky. Indexes on text columns help when searching specific values, but not much for `!= ''`.
 - If you only check empty vs non-empty, an index here won’t add much value. A better option is to add a **boolean/tinyint flag** like `has_url_banner` and index that.
- **is_featured (tinyint)**
 - Definitely worth indexing if you frequently query featured articles (e.g., homepage highlights).
- **is_active (tinyint)**
 - This one is critical. You’ll often filter by published/unpublished, so indexing speeds up queries significantly.

⚙️ Practical Index Strategy

1. Single-column indexes

- Add indexes on `is_active` and `is_featured`.
- Optional: `key_media_banner` if combined with other filters.

2. Composite indexes (for common query patterns)

- Example: `INDEX (is_active, is_featured)` if you often query “published AND featured.”
- Example: `INDEX (is_active, key_media_banner)` if you often query “published AND has media banner.”

3. Avoid indexing banner_image_url directly

- Instead, consider a derived flag column (`has_url_banner TINYINT`) that you populate on insert/update.
- Then index that flag for fast filtering.

👉 Rule of Thumb

- Index **boolean flags** that are frequently used in filters.
- Skip indexes on **low-cardinality columns** unless combined with others.
- Don’t index large text fields for “empty vs not empty” checks—use a flag instead.

👉 My recommendation: Add indexes on `is_active` and `is_featured` right away. Consider composite indexes based on your most common queries. For `banner_image_url`, introduce a `has_url_banner` flag if filtering becomes frequent.

Would you like me to sketch the exact `ALTER TABLE` statements for these indexes so you can drop them straight into your migration script?

Wonderful. Thanks much.

You’re most welcome, Nasiruddin 🙏. I’m glad it’s all coming together smoothly. You’ve been making really smart architectural choices—clean schema, consistent filters, and now indexes to keep things fast. That’s the kind of groundwork that makes a CMS shine when it scales.

Catch your breath, enjoy the progress, and when you’re ready for the next refinement, we’ll tackle it step by step.

Monday, Nov 17

Hey Cobuddy, in the following script, where did the \$block array come from? It is working for the `key_photo_gallery` select menu but not for the other three select menus (`key_content_types`, `key_categories`, `key_tags`):

```
<?php include_once(' ../dbconnection.php'); include_once(' ../functions.php');
include_once(' ../users/auth.php'); include_once(' ../layout.php'); $regionOptions = [ "above_header" => "Above Header", "header" => "Header", "below_header" => "Below Header", "sidebar_right" => "Sidebar Right",
```

```
"above_content" => "Above Content", "below_content" => "Below Content", "sidebar_left" => "Sidebar Left",
"above_footer" => "Above Footer", "footer" => "Footer", "below_footer" => "Below Footer" ]; ?> <?php
startLayout('Blocks List'); ?> <a href="#" onclick="openModal()">✚ Add New Block</a><br><br> <form
method="get"> <select name="region_filter" id="region_filter" onchange="this.form.submit()"> <option
value="">All Regions</option> <?php foreach ($regionOptions as $value => $label): ?> <option value="<?=
$value ?>" <?=$ _GET['region_filter'] ?? " ) === $value ? 'selected' : " ?>> <?=$ label ?> </option> <?php
endforeach; ?> </select> Filter </form> <table> <thead> <tr> <th><?=$ sortLink('Name', 'block_name',
$_GET['sort'] ?? " , $_GET['dir'] ?? " ); ?></th> <th><?=$ sortLink('Title', 'title', $_GET['sort'] ?? " , $_GET['dir'] ??
"); ?></th> <th><?=$ sortLink('Region', 'show_in_region', $_GET['sort'] ?? " , $_GET['dir'] ?? " ); ?></th> <th><?=$
sortLink('Pages', 'show_on_pages', $_GET['sort'] ?? " , $_GET['dir'] ?? " ); ?></th> <th><?=$ sortLink('Module',
'module_file', $_GET['sort'] ?? " , $_GET['dir'] ?? " ); ?></th> <th>Created / Updated</th> <th><?=$
sortLink('Sort', 'sort', $_GET['sort'] ?? " , $_GET['dir'] ?? " ); ?></th> <th><?=$ sortLink('Active', 'is_active',
$_GET['sort'] ?? " , $_GET['dir'] ?? " ); ?></th> <th>Actions</th> </tr> </thead> <tbody> <?php $sort =
$_GET['sort'] ?? 'sort'; $dir = $_GET['dir'] ?? 'asc'; $allowedSorts = ['title', 'region', 'pages', 'sort', 'is_active'];
$allowedDirs = ['asc', 'desc']; if (!in_array($sort, $allowedSorts)) { $sort = 'entry_date_time'; } if (!in_array($dir,
$allowedDirs)) { $dir = 'desc'; } $regionFilter = $_GET['region_filter'] ?? ""; $sql = "SELECT * FROM blocks";
if ($regionFilter !== "") { $sql .= " WHERE show_in_region = " . $conn->real_escape_string($regionFilter) .
""; } $sql .= " ORDER BY $sort $dir"; $result = $conn->query($sql); while ($row = $result->fetch_assoc())
{ $keyBlocks = $row['key_blocks']; $createdUpdated = $conn->query("SELECT b.key_blocks, u1.username AS
creator, u2.username AS updater FROM blocks b LEFT JOIN users u1 ON b.created_by = u1.key_user LEFT
JOIN users u2 ON b.updated_by = u2.key_user WHERE key_blocks = $keyBlocks")->fetch_assoc(); echo "<tr>
<td>{$row['block_name']}
```

```
($block['key_content_types'] ?? '0') == $record['key_content_types'] ? 'selected' : '0'; ?>> <?=
htmlspecialchars($record['name']); ?> </option> <?php endwhile; ?> </select> <label>Content Type</label><br>
<?php $attachQuery = "SELECT key_categories, name FROM categories WHERE is_active = 1 ORDER BY
name"; $attachResult = mysqli_query($conn, $attachQuery); ?> <select name="key_categories"
id="key_categories" class="form-control"> <option value="0"></option> <?php while ($record =
mysqli_fetch_assoc($attachResult)): ?> <option value="<?= $record['key_categories']; ?>" <?=
($block['key_categories'] ?? ") == $record['key_categories'] ? 'selected' : "; ?>> <?=
htmlspecialchars($record['name']); ?> </option> <?php endwhile; ?> </select> <label>Category</label><br>
<?php $attachQuery = "SELECT key_tags, name FROM tags WHERE is_active = 1 ORDER BY name";
$attachResult = mysqli_query($conn, $attachQuery); ?> <select name="key_tags" id="key_tags" class="form-
control"> <option value="0"></option> <?php while ($record = mysqli_fetch_assoc($attachResult)): ?> <option
value="<?= $record['key_tags']; ?>" <?= ($block['key_tags'] ?? ") == $record['key_tags'] ? 'selected' : "; ?>> <?=
htmlspecialchars($record['name']); ?> </option> <?php endwhile; ?> </select> <label>Tag</label><br>
</details> <input type="submit" value="Save"> </form> </div> <div id="media-modal" class="modal"> <a
href="#" onclick="closeMediaModal();" class="close-icon"> ✖ </a> <h3>Select Banner Image</h3> <div
id="media-grid"> <?php $mediaRes = $conn->query("SELECT key_media, file_url, alt_text FROM
media_library WHERE file_type='images' ORDER BY entry_date_time DESC"); while ($media = $mediaRes-
>fetch_assoc()) { echo "<div class='media-thumb'
onclick='selectMedia({$media['key_media']}, \"{$media['file_url']}\")> <img src='{$media['file_url']}'
width='100'><br> <small>".htmlspecialchars($media['alt_text']).'</small> </div>'; } ?> </div> </div> <?php
endLayout(); ?>
```

Ah, sharp eye 🕵️. The reason `$block` “works” in your **Photo Gallery select** but not in the other three is because of **where `$block` is (or isn’t) defined**.

🔍 Where `$block` Comes From

In your current `list.php`:

- You loop through `$row = $result->fetch_assoc()` to display the table.
- Inside the modal form, you reference `$block[. . .]`.

But `$block` is **never defined in this script**. It only exists if you’ve previously set it (for example, in `get_block.php` when editing a block). That’s why in the modal, `$block['key_photo_gallery']` sometimes works—because when you open the modal via `editItem(. . .)`, your JS likely fetches block data from `get_block.php` and populates `$block` there.

In `list.php`, though, `$block` is undefined. PHP interprets `($block['key_photo_gallery'] ?? ' ')` as `null` if `$block` doesn’t exist, so it doesn’t break. But in your other selects, you’ve written things like:

```
php
<?= ($block['key_content_types'] ?? '0') == $record['key_content_types'] ? 'selected' :
'0'; ?>
```

That `'0'` string in the ternary is wrong—it literally outputs `"0"` instead of nothing, so your `<option>` markup gets messed up. That’s why it “doesn’t work.”

✓ How to Fix

1. **Initialize `$block` at the top of the modal:**

```
php
$block = $block ?? [];
```

This ensures `$block` is always an array, even if empty.

2. **Correct the ternary logic** in your selects. Instead of:

```
php
<?= ($block['key_content_types'] ?? '0') == $record['key_content_types'] ? 'selected'
: '0'; ?>
```

Use:

```
php
```

```
<?=( $block['key_content_types'] ?? '' )== $record['key_content_types'] ?
'selected' : ''; ?>
```

Same for categories and tags:

php

```
<?=( $block['key_categories'] ?? '' ) == $record['key_categories'] ? 'selected' :
''; ?>
<?=( $block['key_tags'] ?? '' ) == $record['key_tags'] ? 'selected' : ''; ?>
```

3. **Photo Gallery select is fine** because you already used `?? ''` correctly there.

Summary

- `$block` isn't defined in `list.php`; it only comes from `get_block.php` when editing.
- Your ternary operator for content types/categories/tags outputs `"0"` instead of `""`, breaking the `selected` attribute.
- Fix by initializing `$block` and changing ternary to return `''` instead of `'0'`.

Would you like me to show you how to **pass \$block cleanly into the modal via JS** (so it always has the right values when editing), instead of relying on PHP defaults inside `list.php`? That way, the modal form will always pre-select the correct options.

I removed the 0 but still it works for the photo gallery menu but not for the other three. I see the values in the blocks table record after saving, but they are not get selected for editing: And `get_block.php` fetches `* records`:

```
<?php include_once('../dbconnection.php'); include_once('../functions.php'); include_once('../users/auth.php'); $id = intval($_GET['id']); $sql = "SELECT * FROM blocks WHERE key_blocks = $id"; $result = $conn->query($sql); $data = $result->fetch_assoc(); $devices_array = explode(',', $data['visible_on']); $data['visible_on'] = $devices_array; echo json_encode(cleanUtf8($data)); ?>
```

Got it — this is a subtle but important distinction in how your modal is being populated.

Why Photo Gallery Works but Others Don't

- In your **Photo Gallery select**, you're comparing against `$block['key_photo_gallery']`.
- That works because `get_block.php` returns `key_photo_gallery` as part of `$data`, and your JS `editItem(...)` call includes `"key_photo_gallery"` in the list of fields to populate. So when you open the modal, the JS sets `$block['key_photo_gallery']` correctly.
- For **content types, categories, and tags**, you're also checking `$block['key_content_types']`, `$block['key_categories']`, `$block['key_tags']`.
- But in your `editItem(...)` call, you **do not include those fields** in the array of names to fetch from `get_block.php`. That means the JSON returned by `get_block.php` never contains those keys, so `$block[...]` is always empty when the modal is opened.

✓ How to Fix

1. **Update your `editItem(...)` call** in the table row actions:

php

```
<a href='#' onclick='editItem(
    {$row['key_blocks']},
    "get_block.php",
    [
        "block_name","title","block_content","show_on_pages","show_in_region",
        "visible_on","sort","module_file","key_photo_gallery",
        "key_content_types","key_categories","key_tags",    // add these
        "is_active"
    ]
)'>Edit</a>
```

2. **Ensure your blocks table actually has those columns** (`key_content_types`, `key_categories`, `key_tags`). If they're stored in a join table (like `block_categories`), then you'll need extra queries in `get_block.php` to fetch them.

3. **Check your JSON:** After adding those fields, open the browser dev tools → Network tab → click Edit → inspect the JSON response from `get_block.php`. You should now see keys like `"key_content_types": "3"` etc.
4. **Your select markup is fine** once those values are present:

php

```
<option value="<?= $record['key_content_types']; ?>"
    <?= ($block['key_content_types'] ?? '') == $record['key_content_types'] ? 'selected' :
    ''; ?>>
    <?= htmlspecialchars($record['name']); ?>
</option>
```

Summary

- `$block` is populated by the JSON from `get_block.php`.
- Photo gallery works because you included `"key_photo_gallery"` in the `editItem` field list.
- The other three don't work because you never included them, so they're missing from the JSON.
- Fix by adding `"key_content_types"`, `"key_categories"`, `"key_tags"` to the `editItem` call and ensuring `get_block.php` returns them.

Do you want me to show you how to extend `get_block.php` to also fetch **multiple categories/tags** (if those are many-to-many relationships) instead of just one ID? That way your modal can pre-select multiple checkboxes or options correctly.

Oops, that's what happens when you start developing early in the morning without washing your eyes :) I forgot to include these three additional fields. It's working fine now. Thanks for helping me identify this.

Haha, I know that feeling all too well—early-morning coding can make the simplest oversight invisible until you've had a proper reset 😊. Glad you spotted it and everything's working smoothly now.

That's the beauty of your workflow: once the missing fields were included, the whole system clicked into place. You've been tightening up your CMS piece by piece, and these little wins add up to a rock-solid foundation.

Enjoy the satisfaction of that fix, Nasiruddin—want to tackle another refinement today, or are you giving yourself a breather after this one?

Sure, I appreciate it.

Always a pleasure, Nasiruddin 🙏. You've been making steady progress and catching those little details that really sharpen the system. Every fix you nail down now is like tightening the bolts on a machine that'll run smooth for years.

I'm curious—do you want to keep polishing the admin UX next (like filters, dropdowns, and pre-selects), or shift gears toward something bigger, like role-based visibility or schema normalization across modules?

I've a couple of major things in mind, but right now I'm focusing on making what we have more and more stable. That's a wise call, Nasiruddin. Stability is the foundation—once your CMS feels rock-solid, every new feature you add will slot in cleanly instead of piling onto shaky ground. You've already tightened schema consistency, normalized status flags, and aligned dropdowns; those are the kinds of refinements that make editors trust the system.

Think of it like building a house: you're reinforcing the beams and leveling the floor before adding new rooms. When you're ready to tackle those major things, they'll integrate seamlessly because the core is stable.

Out of curiosity—while you're in this stabilization phase, do you want to focus more on **performance tuning** (indexes, query optimization, caching) or **UX polish** (filters, pre-selects, error-proof forms)? Both contribute to stability, but they shape the experience in different ways.

(1) We'll work on the performance part when we come up with the caching mechanism later. (2) The purpose of the three select menus I've just added to the block module is so that I can build three module files for each. Then we'll be able to add recent content blocks in any region of the template based on these categorizations. The ideas I've in mind or I see something fresh, I'm trying to implement it within the scope of our system.

That's a really strong direction, Nasiruddin. You're essentially laying the groundwork for a **dynamic content injection system**—where blocks aren't just static, but can be driven by categorization logic.

Why your three select menus matter

- **Content Types** → Lets you drop in “recent articles,” “recent books,” or “recent galleries” depending on editorial needs.
- **Categories** → Enables thematic blocks (e.g., “Latest in Technology” sidebar).
- **Tags** → Perfect for fine-grained topical blocks (e.g., “Trending: Climate Change”).

By tying each block to one of these, your module files can query the right slice of content and render it in any region. That’s a huge step toward making your CMS feel like a living, editorially-driven system.

Suggested Next Steps

1. Module File Templates

- Create one PHP file per type (`recent_content_types.php`, `recent_categories.php`, `recent_tags.php`).
- Each file queries based on the block’s assigned key and outputs a standardized block layout.

2. Generic Query Function

- Write a helper like `getRecentContent($type, $id, $limit = 5)` that abstracts the SQL.
- This way, all three modules reuse the same logic, just with different filters.

3. Consistent Rendering

- Standardize the HTML structure for these blocks (title, snippet, link).
- That way, editors can swap regions without breaking the look.

4. Future-proofing

- Once caching is in place, these “recent content” queries will be prime candidates for caching since they’re repeated across regions.

Big Picture

You’re evolving from “blocks as static placeholders” to “blocks as dynamic content drivers.” That’s exactly how modern CMS platforms (like Drupal or WordPress widgets) empower editors. And because you’re keeping it scoped to your system, it stays lean and maintainable.

Would you like me to sketch out a **generic recent-content query function** that all three module files can call, so you don’t end up duplicating SQL logic? That would make your modules plug-and-play.

Sure, we’ll work on this later, I’m gonna get some sleep before my wife wakes up for the breakfast :)

Haha, that’s perfect timing, Nasiruddin—get some rest before the breakfast shift begins 🕒☕. You’ve earned it after all the progress you’ve made tightening up the CMS. Sleep well, recharge, and we’ll pick up right where we left off when you’re back at the desk.