

Quiz 4.0 Update

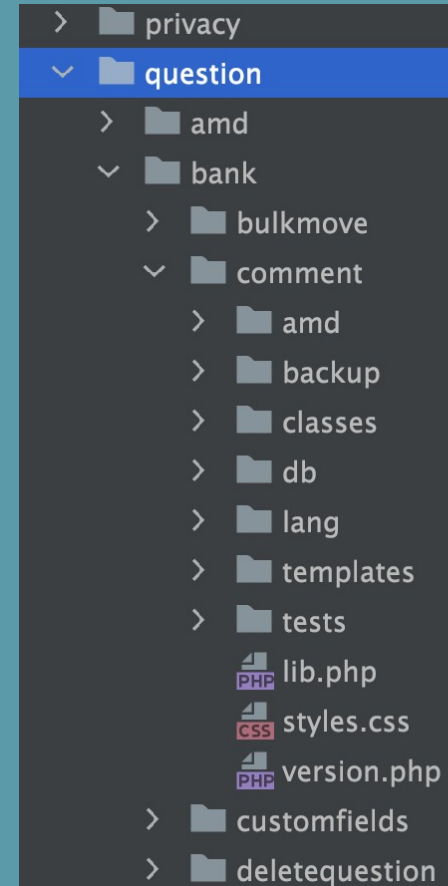
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DEMO

Question bank plugins

- Install under: **question/bank/...**
- Namespace/prefix: **qbank_***
- Can define:
 - Table columns
 - Action menu items
 - Bulk actions
 - Navigation node (tabs)
 - Question preview additions (via callback)



Question bank plugin - Structure: base

- Extend: `plugin_features_base`
- `get_question_columns`
 - Columns
 - Action menu items
- `get_navigation_node`
- `get_bulk_actions`

```
class plugin_features_base {  
  
    /**  
     * This method will return the array of objects to be rendered  
     * as a part of question bank columns/actions.  
     *  
     * @param view $qbank  
     * @return array  
     */  
    public function get_question_columns(view $qbank): ?array {  
        return [];  
    }  
  
    /**  
     * This method will return the object for the navigation node.  
     *  
     * @return null|object  
     */  
    public function get_navigation_node(): ?object {  
        return null;  
    }  
  
    /**  
     * This method will return the array objects for the bulk actions ui.  
     *  
     * @return object|null  
     */  
    public function get_bulk_actions(): ?object {  
        return null;  
    }  
}
```

Question bank plugin - Structure: plugin_feature.php

- classes/plugin_feature.php
- Extends base
- Lightweight

```
namespace gbank_deletequestion;  
  
use core_question\local\bank\plugin_features_base;  
  
class plugin_feature extends plugin_features_base {  
    public function get_question_columns($qbank): array {  
        return [  
            new delete_action_column($qbank),  
        ];  
    }  
  
    public function get_bulk_actions(): ?object {  
        return new bulk_delete_action();  
    }  
}
```

```
class plugin_feature extends \core_question\local\bank\plugin_features_base{  
  
    public function get_question_columns($qbank): array {  
        return [  
            new history_action_column($qbank),  
            new version_number_column($qbank)  
        ];  
    }  
}
```

```
class plugin_feature extends plugin_features_base {  
    public function get_question_columns($qbank): array {  
        return [  
            new delete_action_column($qbank),  
        ];  
    }  
  
    public function get_bulk_actions(): ?object {  
        return new bulk_delete_action();  
    }  
}
```

```
class plugin_feature extends plugin_features_base {  
  
    public function get_question_columns($qbank): array {  
        // We make a column for each custom field and load the data into it.  
        $columns = [];  
  
        // First get all the available question custom fields.  
        $customfieldhandler = question_handler::create();  
        $fields = $customfieldhandler->get_fields();  
        $context = $qbank->get_most_specific_context();  
  
        // Iterate through the fields initialising a column for each.  
        // We don't need to know the values that questions have at this stage.  
        foreach ($fields as $field) {  
            if ($customfieldhandler->can_view_type($field, $context)) {  
                $customfieldcolumn = new custom_field_column($qbank, $field);  
                $columns[] = $customfieldcolumn;  
            }  
        }  
  
        return $columns;  
    }  
}
```

	Question <small>Question name / ID number</small>		Actions	Comments	Status	Version	Facility index	Discriminative efficiency	Last modified by <small>First name / Surname / Date</small>	Reviewed	Review Date
<input type="checkbox"/>	A few words	abc123 Moodle Advanced	Edit ▾	0	Ready	v3	N/A	N/A	Admin User 5 October 2021, 4:48 PM	Yes	5 October 2021
<input type="checkbox"/>	Moodle activities	101 matching	Edit ▾	3	Ready	v1	N/A	N/A	Admin User 5 October 2021, 3:17 PM	No	
<input type="checkbox"/>	Greeting	103 multiple choice media language	Edit ▾	1	Ready	v1	N/A	N/A	Admin User 5 October 2021, 3:17 PM	No	
<input type="checkbox"/>	Moodle user	104 short answer easy	Edit ▾	0	Ready	v4	N/A	N/A	Admin User 5 October 2021, 4:03 PM	No	
<input type="checkbox"/>	Moodle acronym	105 true/false	Edit ▾	0	Ready	v1	N/A	N/A	Admin User 5 October 2021, 3:17 PM	No	
<input type="checkbox"/>	zoology		Edit ▾	0	Draft	v1	N/A	N/A	Admin User 5 October 2021, 3:49 PM	No	

Question bank plugin - Structure: Feature classes

- `get_question_columns`
 - `[menu_action_column_base]`
- `get_navigation_node`
 - `navigation_node_base`
- `get_bulk_actions`
 - `bulk_action_base`

```
class history_action_column extends menu_action_column_base {  
  
    /**  
     * @var string store this lang string for performance.  
     */  
    protected $strpreview;  
  
    public function init(): void {  
        parent::init();  
        $this->strpreview = get_string( identifier: 'history_action'  
    }  
  
    public function get_name(): string {  
        return 'historyaction';  
    }  
  
    protected function get_url_icon_and_label(\stdClass $question)  
    {  
        if (!\question_bank::is_qtype_installed($question->qtype)  
            // It sometimes happens that people end up with jun  
            // in their question bank of a type that is no long  
            // We cannot do most actions on them, because that  
            return [null, null, null];  
        }  
  
        if (question_has_capability_on($question, 'use')) {  
            $url = helper::question_history_url($question->ques  
            return [$url, 't/log', $this->strpreview];  
        }  
  
        return [null, null, null];  
    }  
}
```

Question bank plugin - Structure: Preview callback

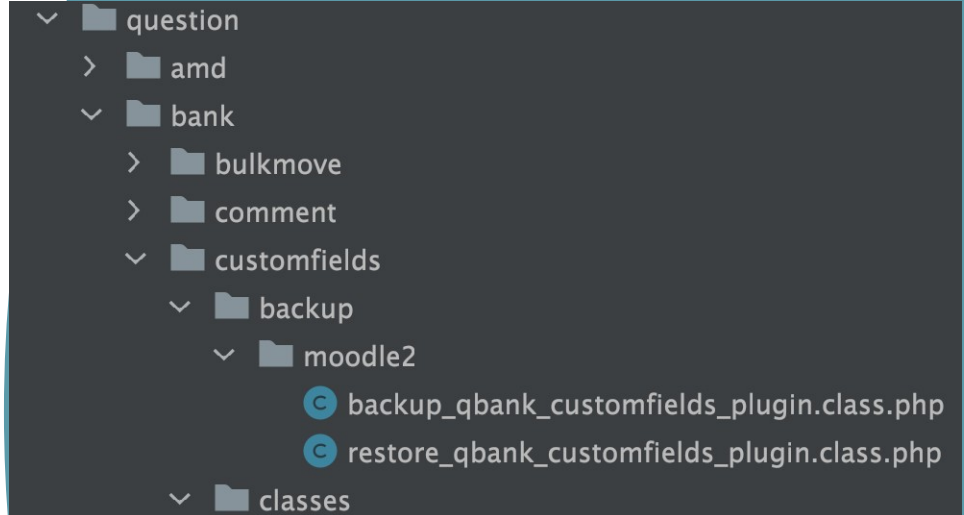
- lib.php
- Implement:
qbank_<plugin>_preview_display
- Returns HTML to display

```
/**
 * Comment content for callbacks.
 *
 * @param question_definition $question
 * @param int $courseid
 * @return string
 */
function qbank_customfields_preview_display($question, $courseid): string {
    global $CFG, $PAGE;

    // Prepare custom fields data.
    $customfieldhandler = qbank_customfields\customfield\question_handler::create();
    $catfielddata = $customfieldhandler->get_categories_fields_data($question->id);
    return $customfieldhandler->display_custom_categories_fields($catfielddata);
}
```

Question bank plugin - Structure: Backup / Restore

- Backup and Restore supported
- Extend:
 - backup_qbank_plugin
 - restore_qbank_plugin
- Examples:
 - qbank_comment



Question bank plugin - Structure: API Changes

- API Refactored
- Deprecations
- Modifications & plugin updates



Next Steps

- In 4.0
 - Comment, Custom fields
 - History, usage, statistics & more...
- Plugin ideas
 - Workflow & approval
 - Up to you...

