



Source code

Additional OER Plug-In Questionnaire for Self-Assessment and Comparison to other Information Security Experts



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Erasmus+ Programme
of the European Union



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1 Plug-In Database

```
<?php
/* ----- */
/* Creating tables for the plugin - */
/* Author: Anuj Sharma----- */
/* Created on: 18-02-2021 ----- */
/* ----- */

function bfmquestionnaire_table_create() {
    echo "Working";
    global $wpdb;

    $questions_table = $wpdb->prefix . 'bfmsurvey_questions';
    $user_responses_table = $wpdb->prefix . 'bfmsurvey_user_responses';
    $userinfo_table = $wpdb->prefix . 'bfmsurvey_userinfo';

    $charset_collate = $wpdb->get_charset_collate();

    $questions_table_sql = "CREATE TABLE $questions_table (
        question_id int(10) NOT NULL AUTO_INCREMENT,
        question_text text DEFAULT '' NOT NULL,
        question_chapter text DEFAULT '' NOT NULL,
        PRIMARY KEY (question_id)
    ) $charset_collate;";

    $user_responses_table_sql = "CREATE TABLE $user_responses_table (
        id int(10) NOT NULL AUTO_INCREMENT,
        user_id text NOT NULL,
        question_id int(10) NOT NULL,
        response_text text DEFAULT '' NOT NULL,
        PRIMARY KEY (id),
        FOREIGN KEY (question_id) REFERENCES ".$questions_table."
(question_id)
    ) $charset_collate;";

    require_once( ABSPATH . 'wp-admin/includes/upgrade.php' );
    dbDelta($questions_table_sql);
    dbDelta($user_responses_table_sql);
}
```

2 Plug-In Display Form

```
<?php
/* ----- */
/* To get survey questions from the database */
/* Author: Anuj Sharma----- */
/* Created on: 18-02-2021 ----- */
/* ----- */

function get_questions(): string {
```



```
global $wpdb;
$table_name = $wpdb->prefix . 'bfmsurvey_questions';
$survey_questions = $wpdb->get_results("SELECT * FROM $table_name ORDER
BY RAND()");
$quest_json = addslashes(json_encode($survey_questions));

// JS bootstrap

return
"<form name='bfm_questionnaire'
  method='post'
  target='_blank'
  id='bfm_questionnaire'
  action='". plugins_url( 'bfm-questionnaire_sub-
mit_form.php', __FILE__ )."'
  style='margin: auto;
  width: 100%;
  border: 1px solid;
  padding: 20px;
  font-size: medium;'
  ><button type='button' class='btn btn-primary btn-lg btn-block
form-group' id='next_button' onclick=handleNextClicked() >Next Ques-
tions</button></form>

  <form name='certificate-quest'
  method='post'
  target='_blank'
  id='bfm_certificate'
  action='". plugins_url( 'bfm-questionnaire-generate-certif-
icate.php', __FILE__ )."'
  style='margin: auto;
  width: 100%;
  border: 1px solid;
  display:none;
  padding: 20px;
  font-size: medium;'
  >
  <nav class='navbar navbar-light bg-light'>
    <span class='navbar-brand mb-0 h2'>Generate Certificate of
Completion!</span>
  </nav>
  <input id='name' class='form-control' type='text' name='name'
placeholder='Enter your Name.' required>
  <small id='nameHelp' class='form-text text-muted'>We do not
store or share your name or any personal details. It will be used only for
the purpose of certificate generation.</small>
  <button type='submit'
  class='btn btn-primary btn-lg btn-block form-group'
  id='generate_certificate_button'
  >Download
  </button>
</form>

<style>
  .form-group {
    margin-bottom: 0rem;
    margin-top: 2rem;
  }
</style>
```



```
<script>
  let number_of_questions_per_page = 10 //Number of Questions per
page
  let questions = JSON.parse('$quest_json');
  let input_strings = ['YES', 'NO']
  let questions_finished = 0;
  let questions_over = false;
  renderQuestions();

  function renderQuestions() {
    for (let i=questions_finished;i<number_of_ques-
tions_per_page+questions_finished;i++) {
      if (!questions[i]) { break;} // if no questions exist
break the loop
      if (questions.length <= number_of_ques-
tions_per_page+questions_finished) {
        questions_over = true;
      }

      let questionFormGroup = document.createElement('div');
      questionFormGroup.setAttribute('class', 'form-group')
      let questionLabel = document.createElement('label');
      questionLabel.setAttribute('class', 'question');
      let questionText = document.create-
TextNode((i+1).toString() + '. ' + questions[i]['question_text']);
      questionLabel.appendChild(questionText);
      questionFormGroup.appendChild(questionLabel);
      document.getElementById('bfm_questionnaire').insertBe-
fore(questionFormGroup, document.getElementById('next_button'))
      for (let j = 0; j<input_strings.length; j++) {
        let parentRadioDiv = document.createElement('div');
        parentRadioDiv.setAttribute('class', 'custom-con-
trol custom-radio')

        let radioAnswer = document.createElement('input');
        radioAnswer.setAttribute('type', 'radio');
        radioAnswer.setAttribute('id', 'answer' + ques-
tions[i]['question_id'] + input_strings[j]);
        radioAnswer.setAttribute('class', 'form-check-in-
put');

        radioAnswer.setAttribute('name', ques-
tions[i]['question_id']);
        radioAnswer.setAttribute('value', in-
put_strings[j]);

        let label = document.createElement('label');
        label.setAttribute('class', 'form-check-label')
        label.setAttribute('style', 'margin-left: 17px')
        label.innerText = input_strings[j]
        parentRadioDiv.appendChild(radioAnswer);
        parentRadioDiv.appendChild(label);
        document.getElementById('bfm_questionnaire').in-
sertBefore(parentRadioDiv, document.getElementById('next_button'));
      }
    }
  }

  function clearForm() {
    let child_nodes = document.getElementById('bfm_questio-
naire').childNodes;
    for (let i = 0;i<child_nodes.length; i++) {
      if (child_nodes[i]) {
        if (child_nodes[i].id != 'next_button') {
```



```
        child_nodes[i].setAttribute('style', 'display:none')
    }
}
}
if (questions_over) {
    document.getElementById('next_button').remove();
    let submit_button = document.createElement('button');
    submit_button.setAttribute('type', 'submit');
    submit_button.setAttribute('id', 'submit');
    submit_button.setAttribute('class', 'btn btn-primary');
    submit_button.setAttribute('onClick', 'submitButtonClicked()');
    submit_button.innerHTML = 'Submit and download result';
    document.getElementById('bfm_questionnaire').appendChild(submit_button);

    document.getElementById('bfm_certificate').style.display = 'block';
}
}

function submitButtonClicked() {
    document.getElementById('submit').setAttribute('style', 'display:none;');
    let label = document.createElement('label');
    label.innerText = 'Thank you! your result will be downloaded soon...';
    document.getElementById('bfm_questionnaire').appendChild(label);
}

function checkAllAnswered() {
    let form = document.forms.bfm_questionnaire;
    if (form.querySelectorAll('input').length/2 != form.querySelectorAll('input:checked').length) {
        alert('Please answer all the questions before moving ahead!');
        return false;
    }
    return true;
}

function handleNextClicked() {
    if (!checkAllAnswered()) {
        return;
    }
    questions_finished = questions_finished + number_of_questions_per_page;
    clearForm();
    renderQuestions()
}
</script>"
}
```



3 Plug-In Submit Form

```
<?php
/* ----- */
/* Author: Anuj Sharma----- */
/* Created on: 18-02-2021 ----- */
/* If form is submitted get data and populate in db */

require_once( dirname(dirname(dirname(dirname( __FILE__ ))))."/wp-con-
fig.php");
require_once(plugin_dir_path( __FILE__ ). "/libs/diag-fpdf/diag.php");
require_once(plugin_dir_path( __FILE__ ). "static_content_question-
naire.php");
require_once(plugin_dir_path( __FILE__ ). "bfm-questionnaire-generate-certifi-
cate.php");

function submit_survey_data() {

    global $wpdb;
    $user_id = uniqid();
    $table_name = $wpdb->prefix . 'bfmsurvey_user_responses';

    for ($i=1; $i<62; $i++) {
        $question_id = $i;
        $response_text = isset( $_POST[$i]) ? $_POST[$i] : 'not filled';

        $wpdb->insert($table_name, array(
            'user_id' => $user_id,
            'question_id' => $question_id,
            'response_text' => $response_text
        ), $format = array(
            '%s', '%d', '%s'));
    }
    //echo "<script>alert('Thank you for taking the survey');</script>";

    wp_redirect('https://information-security-in-sme.eu/wp-con-
tent/plugins/bfm-questionnaire/bfm-questionnaire_sub-
mit_form.php?test_id='.$user_id );
}

/* If request_method is GET then retrieve user responses based on user_id
*/
function retrieve_survey_data() {
    global $wpdb;
    $table_name = $wpdb->prefix . 'bfmsurvey_user_responses';
    $table_for_join = $wpdb->prefix . 'bfmsurvey_questions';

    if( !isset($_GET['test_id']) ) {
        wp_redirect( 'http://information-security-in-sme.eu/' );
    }

    $user_id = $_GET['test_id'];

    $survey_responses = $wpdb->get_results("
SELECT user_responses.user_id, questions.question_text, questions.ques-
tion_id, user_responses.response_text, questions.question_chapter
FROM $table_name AS user_responses
INNER JOIN $table_for_join AS questions
ON user_responses.question_id = questions.question_id
WHERE user_responses.user_id = '$user_id' ");
```




```
// print_r(json_encode($survey_responses));
$response_percent = array();
foreach ($survey_responses as $response) {
    $trimmed_chapter_name = trim($response->question_chapter, "\" ");
    $response->question_chapter = trim($response->question_chapter, "\"
");

    if (!array_key_exists($trimmed_chapter_name, $response_percent)) {
        $response_percent[$trimmed_chapter_name] = array();
    }
    $response_percent[$trimmed_chapter_name][$response->response_text] =
response_text] + 1;
    $response_percent[$trimmed_chapter_name]["Total"] =
    $response_percent[$trimmed_chapter_name]["Total"] + 1;
}
$data = array();
foreach ($response_percent as $key => $value) {
    $data[$key] = $value["YES"] == 0 ? 0 :
round($value["YES"]/$value["Total"] * 100);
}
// print_r(json_encode($survey_responses));
//PDF generation
generate_pdf($data, $survey_responses);
}

function generate_pdf($data, $survey_responses) {
    // print_r(json_encode($data));
    create_radar_graph($data);

    $pdf = new PDF_Diag();

    $pdf->SetMargins(20,20,40);
    $pdf->AddPage();
    $pdf->SetFont(get_font_name(), '', 25);
    $pdf->SetTextColor(0,33,99);

    $pdf->Cell(0, 5, 'Competence Assessment Information', 0, 1, 'C');
    $pdf->Cell(0, 20, 'Security in SME', 0, 1, 'C');
    $pdf->SetLineWidth(1);
    $pdf->Line($pdf->GetX(), $pdf->GetY(), $pdf->GetPageWidth() - 40, $pdf-
>GetY());
    $pdf->SetLineWidth(0);

    $pdf->SetFont(get_font_name(), 'B', 23);
    $pdf->Cell(0, 40, 'Overview', 0, 1, '');
    // $pdf->Rect(20, 70, 40, 40, '');
    $pdf->SetFillColor(0,33,99);
    $pdf->Rect($pdf->GetPageWidth() - 40, 0, 40, $pdf->GetPageHeight(),
'F');

    $pdf->SetFillColor(109,109,109);
    $pdf->Rect(0, $pdf->GetPageHeight()-25, $pdf->GetPageWidth(), 25, 'F');

    $pdf->Image('tebeisi.png', $pdf->GetPageWidth() - 70, $pdf->GetPage-
Height()-25, 63,25);

    $pdf->SetFont(get_font_name(), '', 12);
    $pdf->SetTextColor(255,255,255);
    $pdf->Text($pdf->GetPageWidth() - 31, 10, date("d/m/Y"));
    $pdf->SetTextColor(0,33,99);
```



```
$pdf->Ln(10);
$valX = $pdf->GetX();
$valY = $pdf->GetY();

// $pdf->BarDiagram(190, 60, $data, '%l : %v' . '%', ar-
ray(255,175,100));
$pdf->Image('tmp/anuj.png',20, 60, 145,110);

$pdf->ln(125);
$pdf->SetFont(get_font_name(), 'B', 10);
$pdf->SetTextColor(0,0,0);
$pdf->Write(5, "DISCLAIMER: ");
$pdf->SetFont(get_font_name(), '', 10);
$pdf->Write(5, getDisclaimer());

$text_content = get_static_content();
// $pdf->Text($pdf->GetPageWidth() - 70, $pdf->GetPageHeight() - 15 ,
date("d/m/Y"));
foreach($data as $topic => $result_percent) {
    generate_next_page($pdf, $topic, $result_percent, $text_con-
tent[$topic], $survey_responses);
}

$pdf->Output('I', $user_id.'.pdf');
}

function generate_next_page($pdf, $title, $result_percent, $text_content,
$survey_responses) {
    $pdf->AddPage();
    $pdf->SetFont(get_font_name(), '', 18);

    $pdf->SetTextColor(109,109,109);
    $pdf->Cell(0, 10, $title, 0, 1, '');
    $pdf->SetLineWidth(1);
    $pdf->Line($pdf->GetX(), $pdf->GetY(), $pdf->GetPageWidth() - 40, $pdf-
>GetY());
    $pdf->SetLineWidth(0);

    $pdf->ln(10);
    //About Header
    $pdf->SetFont(get_font_name(), '', 14);
    $pdf->SetTextColor(255,255,255);
    $pdf->SetFillColor(0,33,99);
    $pdf->Cell(145, 10, ' ABOUT', $border=0, $ln=0, $align='', $fill=true,
$link='');

    //about content text
    $pdf->ln(11);
    $pdf->SetFont(get_font_name(), '', 12);
    $pdf->SetTextColor(0,0,0);
    $pdf->Write(7, $text_content["about"]);

    // result bar and text inside
    $pdf->ln(15);
    $pdf->SetFont(get_font_name(), '', 11);
    $pdf->SetTextColor(0,0,0);
    $pdf->SetFillColor(mt_rand(0,255),mt_rand(0,255),mt_rand(0,255));
    $pdf->Cell(1, 8, '',0,0);
    if ($result_percent == 0) {
```



```

$pdf->Cell(1, 8, 'Your Assesment Percentage: '.$result_percent.'%',
$border=0, $ln=0, $align='', $fill=true, $link='');
} else {
    $pdf->Cell($result_percent, 8, 'Your Assesment Percentage: '.$re-
sult_percent.'%', $border=0, $ln=0, $align='', $fill=true, $link='');
}

$pdf->ln(7);
$pdf->Cell(100, 8, '0-----50%-----
-----100%', $border=0, $ln=0, $align='', $fill=false,
$link='');

//whatit covers header
$pdf->ln(20);
$pdf->SetFont(get_font_name(), '', 14);
$pdf->SetTextColor(255,255,255);
$pdf->SetFillColor(0,33,99);
$pdf->Cell(145, 10, ' WHAT IT COVERS', $border=0, $ln=0, $align='',
$fill=true, $link='');

//what it covers text content
$pdf->ln(5);
$pdf->SetFont(get_font_name(), '', 12);
$pdf->SetTextColor(0,0,0);
$pdf->ln(7);
$pdf->Write(6, $text_content["covers"]);

$pdf->ln(20);
$pdf->SetFont(get_font_name(), '', 14);
$pdf->SetTextColor(255,255,255);
$pdf->SetFillColor(0,33,99);
$pdf->Cell(145, 10, ' WHAT IT MEANS FOR YOU', $border=0, $ln=0,
$align='', $fill=true, $link='');

//what it covers text content
$pdf->ln(5);
$pdf->SetFont(get_font_name(), 'B', 12);
$pdf->SetTextColor(0,0,0);
$pdf->ln(7);
if ($result_percent < 50 ) {
    $pdf->Write(6, "There is a scope of improvement. You could start
focusing on following:");
} elseif ($result_percent < 75) {
    $pdf->Write(6, "You are good! You just need to know a few
things:");
} elseif($result_percent < 95) {
    $pdf->Write(6, "Almost a perfect score! You might want to consider
these points:");
} elseif($result_percent == 100) {
    $pdf->Write(6, "A perfect Score!");
}

$pdf->ln(5);
$pdf->SetFont(get_font_name(), '', 12);
$pdf->SetTextColor(0,0,0);
$response_comments = get_statements_for_topic($title, $survey_re-
sponses);
foreach($response_comments as $comment) {
    $pdf->ln(7);
}

```



```
$pdf->Write(6, chr(127)." ".$comment);
}

$pdf->SetFillColor(0,33,99);
$pdf->Rect($pdf->GetPageWidth() - 40, 0, 40, $pdf->GetPageHeight(),
'F');

$pdf->SetFillColor(109,109,109);
$pdf->Rect(0, $pdf->GetPageHeight()-25, $pdf->GetPageWidth(), 25, 'F');

$pdf->Image('tebeisi.png', $pdf->GetPageWidth() - 70, $pdf->GetPage-
Height()-25, 63,25);
}

function get_font_name() {
    return 'Arial';
}

function get_statements_for_topic($title, $survey_responses) {
    $response_comments = array();
    $question_comments = get_question_comments();
    foreach ($survey_responses as $response) {
        if ($response->question_chapter == $title && $response->re-
sponse_text == "NO") {
            array_push($response_comments, $question_comments[$response-
>question_id]);
        }
    }
    return $response_comments;
}

function create_radar_graph($data_surv) {

    include(plugin_dir_path( __FILE__ ). "/libs/jpgraph-
4.3.4/src/jpgraph.php");
    include(plugin_dir_path( __FILE__ ). "/libs/jpgraph-
4.3.4/src/jpgraph_radar.php");

    $titles = array_keys($data_surv);
    $data = array_values($data_surv);

    $graph = new RadarGraph (1200,900);

    $graph->title->Set(' Competence Assessment Spider Chart');
    $graph->title->SetFont(FF_VERDANA,FS_NORMAL,26);

    $graph->SetTitles($titles);
    $graph->SetCenter(0.5,0.55);
    $graph->HideTickMarks();
    $graph->SetColor('lightblue@0.8');
    $graph->axis->SetColor('darkgray');
    $graph->grid->SetColor('darkgray');
    $graph->grid->Show();

    $graph->axis->title->SetFont(FF_ARIAL,FS_NORMAL,14);
    $graph->axis->title->SetMargin(5);
    $graph->SetGridDepth(DEPTH_BACK);
    $graph->SetSize(0.6);

    $plot = new RadarPlot($data);
    $plot->SetLegend('Your Score');
```



```

$plot->SetColor('red@0.2');
$plot->SetLineWeight(1);
$plot->SetFillColor('red@0.7');

$plot->mark->SetType(MARK_IMG_SBALL, 'red');

$plot2 = new RadarPlot(ar-
ray(48.50,54.00,45.83,56.94,53.89,83.33,46.36,36.36,45.83,49.50,54.58,47.16
,58.75));
$plot2->SetLegend('Expert Score');
$plot2->SetColor('green@0.2');
$plot2->SetLineWeight(1);
$plot2->SetFillColor('green@0.7');

// $plot2->mark->SetType(MARK_IMG_SBALL, 'red');
$graph->Add($plot2); //for expert hardcoded
$graph->Add($plot);

// $graph->Stroke();
$graph->Stroke(plugin_dir_path( __FILE__ ).'/tmp/anuj.png');
}

/* Checks if the request method is POST or GET */
if( $_SERVER['REQUEST_METHOD'] === 'POST' ) {
    submit_survey_data();
} elseif ( $_SERVER['REQUEST_METHOD'] === 'GET' ) {
    retrieve_survey_data();
}

```

4 Plug-In Certificate Generator

```

<?php
/* ----- */
/* Author: Anuj Sharma----- */
/* Created on: 18-02-2021 ----- */
/* If form is submitted get data and populate in db */

require_once( dirname(dirname(dirname(dirname(__FILE__)))) .'/wp-con-
fig.php');
require_once(plugin_dir_path( __FILE__ ). "/libs/fpdf/fpdf.php");

/* Checks if the request method is POST or GET */
if( $_SERVER['REQUEST_METHOD'] === 'POST' ) {
    $pdf = new FPDF('L', 'mm', array(337,190));
    generateCertificate($_POST['name'], $pdf);
    $pdf->Output('I', $name.'.pdf');
}

function generateCertificate($name, $pdf) {
    $pdf->AddPage();
    $pdf->Image('Certificate.jpg',0,0);
    $pdf->SetFont('Arial', 'I', 12);
    $pdf->SetTextColor(0,0,0);
    $pdf->Text(55, 145 , date("d/m/Y"));
    $pdf->Text(150, 60 , $name);
}

```

Source Code

Additional OER Plug-In Questionnaire for Self-Assessment and Comparison to other Information Security Experts

BF/M-Bayreuth



Teilzertifizierung im Berufsfeld Informationssicherheit - TeBeISi

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