

To do this quiz, you may reference anything (Internet, Assignments, Books, etc.) **except** persons (other than yourself) directly or indirectly. You may also start from your existing relevant assignment to tailor the code for the quiz.

Completion: Required

Submission: Required

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Last Name: \_\_\_\_\_

First Name: \_\_\_\_\_

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### **1) How and what to submit?**

Submit the following (upload in Blackboard to the available container) in **"one"** **PDF document** (not in docx or any other format):

- i) The certification page (see next page) should be the first page, followed by
- ii) your solution to the problems given on this assignment.

One way is to copy the certification page and your solution to the problems into a Word document and then save the Word document as PDF, and upload the PDF version (not docx version). Only the PDF version will be graded.

**2) Only ONE upload attempt is allowed:** Before submitting a document through Blackboard, you should review the document being uploaded to make sure that you are uploading the correct document (e.g. do not upload the assignment belonging to another course). To help you prevent uploading wrong documents, notes (titled **"HelpOnSubmissionThroughBlackboard"** on how to save & review drafts before final submission have been uploaded under **Reference Material** folder.

# **Certification Page**

*This page must be the first page of your uploaded document.*

*Your assignment will not be graded without this page (completed with your full name in the area provided) as the first page of your uploaded document.*

I, \_\_\_\_\_, certify that the work I am uploading represents my own efforts, and is not copied from anyone else or any other resource (such as Internet). *Furthermore, I certify that I have not let anyone copy from my work.*

**Tutorial on how to create a DBOR-Integrated website on 000webhost.com**  
**(do not submit tutorial portion)**

**1) Creating a website:** Access *000webhost.com* using your credentials. Access *File manager* → *Upload files now* and create *index.php* file inside *public\_html* folder to represent the main page of your website. This page will popup when your website at yourdomain.com (e.g. <https://janedoe.000webhostapp.com>) is visited.

```
<html>
  <head>
    <title>Welcome</title>
  </head>
  <body>
    Welcome to Jane Doe's Main Webpage </br>
  </body>
</html>
```

**2) Connecting a website to DBOR:** Add php code on top of the above HTML code to access your database:

```
<?php
require_once __DIR__ . '/../required/db_connect.php';
?>
<html>
  <head>
    <title>Welcome</title>
  </head>
  <body>
    Welcome to Jane Doe's Main Webpage </br>
  </body>
</html>
```

**3) Retrieving data from DBOR for a website:** Add php code to the above, to display rows from *person* table:

```
<?php
require_once __DIR__ . '/../required/db_connect.php';
?>
<html>
  <head>
    <title>Welcome</title>
  </head>
  <body>
    Welcome to Jane Doe's Clients Main Page </br>
    ===== </br>
    <?php
    if ($stmt=$mysqli->prepare("SELECT * FROM person LIMIT 100")) {
        $stmt->execute();
        $stmt->bind_result($pname,$street,$city);
        printf("Name  Street  City</br>");
        while ($stmt->fetch()) {
            echo $pname . " " . $street . " " . $city . "</br>";
        }
        $stmt->close();
    }
    else{ echo "error";
    $mysqli->close();
    }
    ?>
    =====</br>
  </body>
</html>
```

Visit your website (e.g. <https://janedoe.000webhostapp.com>) to verify that the page developed so far is displayed including rows from table *person*:

```
Welcome to Jane Doe's Clients Main Page
=====
Name Street City
dolly pstreet brownsville
marisol zenith harlingen
zolly finder harlingen
=====
```

**4) Design issues:** Ben complains about the aesthetics of the site. He refers to the use of CSS (Cascading Style Sheet) to make it better. But he realizes that the purpose of the tutorial is not to produce stunning websites, but to learn how to integrate a website with DBOR. Mary agrees that bells and whistles can be added to any website once it has substance.

**Quiz Portion** (This portion needs to be submitted for credit through Blackboard.)

**1)** Your website on PaaS must read **device** table from DBOR to show the status of SW1 (*simulating a sensor*) and LED1 (*simulating an actuator*) along with the time-stamp of when the data was read from DBOR:

Time-stamp of last update from DBOR: *date + time*

Device Name	Status
SW1	0
LED1	1

*Include the following in your submission:*

- HTML code
- CSS code (if any)
- JS code (if any)
- PHP code (if any)
- Snapshots demonstrating the following:
  - a) Take Initial snapshots of the DBOR device table, RPi's SW1 and LED1, and your website.
  - b) Change SW1 on RPi's side (e.g. from initial value of 0 to 1) and take snapshots of the DBOR **device** table, RPi's SW1 and LED1, and your website.
  - c) Change LED1 in DBOR (e.g. from initial value of 1 to 0) and take snapshots of the DBOR **device** table, RPi's SW1 and LED1, and your website.