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Івано-Франківський національний технічний університет нафти й газу

Кафедра комп'ютерних систем і мереж

Лабораторна робота №7
на тему:
«Робота з базами даних в PHP»

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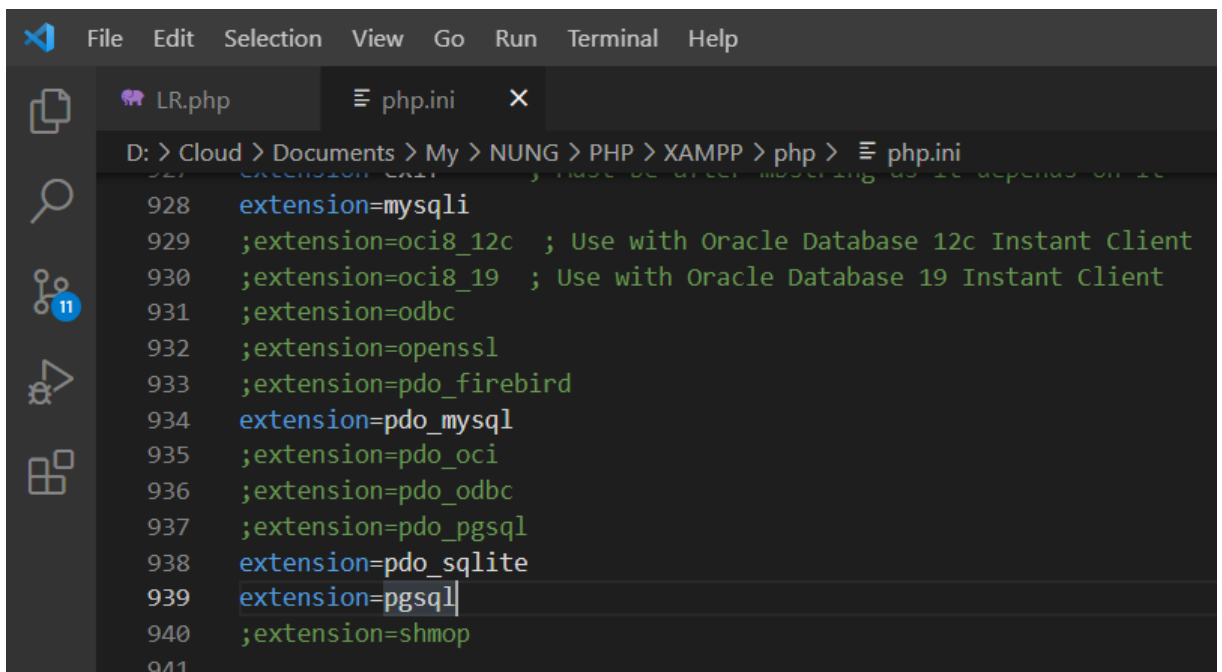
Перевірив: викладач

Слабінога М.О.

м. Івано-Франківськ

2021

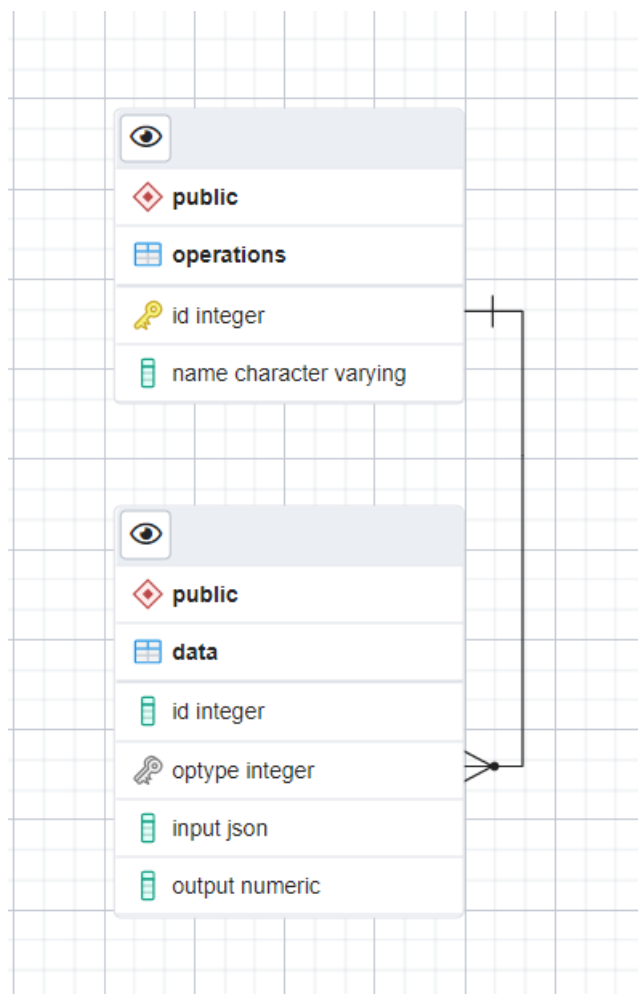
1. Вмикаємо розширення для роботи з PostgreSQL в php.ini



The screenshot shows a code editor with the file `php.ini` open. The path in the breadcrumb is `D: > Cloud > Documents > My > NUNG > PHP > XAMPP > php > php.ini`. The following lines are visible in the file:

```
928 extension=mysqli
929 ;extension=oci8_12c ; Use with Oracle Database 12c Instant Client
930 ;extension=oci8_19 ; Use with Oracle Database 19 Instant Client
931 ;extension=odbc
932 ;extension=openssl
933 ;extension=pdo_firebird
934 extension=pdo_mysql
935 ;extension=pdo_oci
936 ;extension=pdo_odbc
937 ;extension=pdo_pgsql
938 extension=pdo_sqlite
939 extension=pgsql
940 ;extension=shmop
941
```

2. Створюємо базу даних



3. Код програми

```
<?php
```

```
abstract class Operation {

    protected $array;

    public function __construct($array) {
        $this->array = $array;
    }

    public function set_array($array){
        $this->array = $array;
    }

    public function get_array($array){
        return $this->array;
    }

    abstract public function calc($itIsRow, $rowOrColumnNumber);
}

class MatrixSum extends Operation {
    public function calc($itIsRow, $rowOrColumnNumber){
        $sum = 0;

        if($itIsRow)
            foreach ($this->array[$rowOrColumnNumber] as $a)
                $sum += $a;
        else
            foreach ($this->array as $a)
                $sum += $a[$rowOrColumnNumber];

        return $sum;
    }
}

class MatrixAvg extends Operation {
    public function calc($itIsRow, $rowOrColumnNumber){
        $sum = 0;
        $i = 0;
        if($itIsRow)
            foreach ($this->array[$rowOrColumnNumber] as $a){
                $sum += $a;
                $i++;
            }
        else
            foreach ($this->array as $a){
                $sum += $a[$rowOrColumnNumber];
                $i++;
            }
        return $sum/$i;
    }
}
```

```

    }
}

// Connecting, selecting database
$dbconn = pg_connect("host=localhost dbname=phplab user=postgres
password=*****")
or die('Could not connect: ' . pg_last_error());

$query = 'SELECT * FROM operations';
$result = pg_query($query) or die('Query failed: ' .
pg_last_error());
$operation_options="";
if (pg_num_rows($result) > 0) {
    while($row = pg_fetch_assoc($result)) {
        $operation_options.="<option
value='".$row['id']."'>".$row['name']."'</option>";
    }
}

if(isset($_GET['deletedata'])){
    $query = "DELETE FROM data WHERE id=".$_GET['deletedata'];
    pg_query($query);
}

if(isset($_POST['opdata'])){
    $data = json_decode($_POST['opdata'], true);

    if($_POST['optype'] == 1){
        $matrix = new MatrixSum($data["matrix"]);
    } else if($_POST['optype'] == 2){
        $matrix = new MatrixAvg($data["matrix"]);
    }

    $query = "INSERT INTO data VALUES (DEFAULT, " .
$_POST['optype'] . ", '" . $_POST['opdata'] . "', " . $matrix->calc(($data["isRow"] == 'row'), $data["number"]) . ")";
    pg_query($query);
}

$query = "SELECT * FROM data INNER JOIN operations ON
operations.id=data.optype;";
$result = pg_query($query) or die('Query failed: ' .
pg_last_error());
$table_body="";
if (pg_num_rows($result) > 0) {
    while($row = pg_fetch_assoc($result)) {

```

```

        $table_body.="<tr><td>".$row['id']. "</td><td>".$row['name']
        . "</td><td>".$row['input']. "</td><td>".$row['output']. "</td><td><a
href='lr.php?deletedata=".$row['id']. "'>Delete</a></td></tr>";
    }
}

// Free resultset
pg_free_result($result);

// Closing connection
pg_close($dbconn);

?>

<html>
    <head>
        <title>LR7</title>
    </head>
    <body>
        <form method="POST" action="LR.php">
            <p>
                <label for="optype">Select operation type:</label>
            </p>
            <p>
                <select name="optype">
                    <?php echo $operation_options; ?>
                </select>
            </p>
            <p>
                <label for="opdata">Enter JSON like {"isRow": true,
"number": 2, "matrix" : [[12, 15, 15], [21, 15, 15], [30, 15, 15]]}
:</label>
            </p>
            <p>
                <input type="text" name="opdata" required>
            </p>
            <p>
                <input type="submit" value="Send data">
            </p>
        </form>
        <table>
            <thead>
                <tr>
                    <th>ID</th>
                    <th>Operation</th>
                    <th>Input</th>
                    <th>Output</th>
                    <th>Actions</th>
                </tr>
            </thead>
            <tbody>
                <?php echo $table_body; ?>
            </tbody>
        </table>
    </body>
</html>

```

```

        </tbody>
    </table>
</body>
</html>

```

4. Результат виконання

LR7

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localhost/lr/LR.php

Select operation type:

sum ▾

Enter JSON like {"isRow": true, "number": 2, "matrix" : [[12, 15, 15], [21, 15, 15], [30, 15, 15]]} :

Send data

ID	Operation	Input	Output	Actions
1	sum	{"isRow": true, "number": 2, "matrix" : [[12, 15, 15], [21, 15, 15], [30, 15, 15]]}	60	Delete
1	sum	{"isRow": true, "number": 2, "matrix" : [[12, 15, 15], [21, 15, 15], [30, 15, 15]]}	60	Delete
1	sum	{"isRow": true, "number": 2, "matrix" : [[12, 15, 15], [21, 15, 15], [15, 15, 15]]}	45	Delete
2	avg	{"isRow": false, "number": 2, "matrix" : [[12, 15, 15], [21, 15, 15], [30, 15, 15]]}	15	Delete
2	avg	{"isRow": false, "number": 2, "matrix" : [[12, 15, 15], [21, 15, 15], [30, 15, 15]]}	15	Delete
2	avg	{"isRow": false, "number": 2, "matrix" : [[12, 15, 15], [21, 15, 15], [30, 15, 15]]}	15	Delete