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Кафедра комп'ютерних систем і мереж

Лабораторна робота №8
на тему:
«Робота з JSON та CURL в PHP»

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Перевірив: викладач

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1. Код LR8.1.php

```
<?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;
    }
}
```

```

    }

    $dbconn = pg_connect("host=localhost dbname=phplab user=postgres
password=922762525058")
    or die('Could not connect: ' . pg_last_error());

    $query = "SELECT * FROM data INNER JOIN operations ON operations.id
= data.optype";
    $result = pg_query($query) or die('Query failed: ' .
pg_last_error());
    $outputJSON = "";
    if (pg_num_rows($result) > 0) {
        while($row = pg_fetch_assoc($result)) {
            $outputJSON .= "{ \"id\" : " . $row['id'] . ", \"name\" :
\"" . $row['name'] . "\", \"input\" : " . $row['input'] . ", \"output\" :
" . $row['output'] . "},";
        }
    }

    echo "[";
    echo substr($outputJSON, 0, -1);
    echo "]";

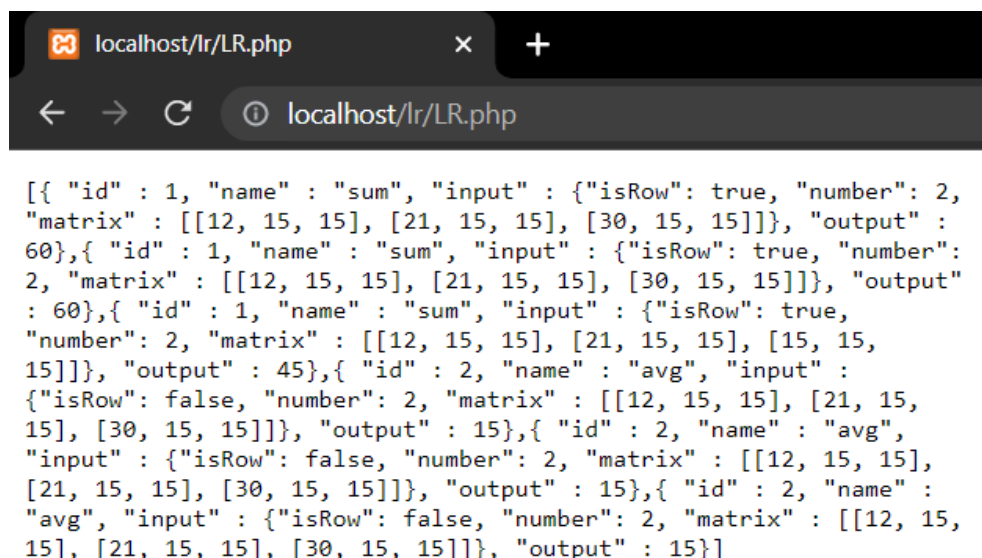
    // Free resultset
    pg_free_result($result);

    // Closing connection
    pg_close($dbconn);

    header("Access-Control-Allow-Origin: *");
    header("Content-Type: application/json");
    ?>

```

2. Результат виконання LR8.1.php



```

[{"id": 1, "name": "sum", "input": {"isRow": true, "number": 2,
"matrix": [[12, 15, 15], [21, 15, 15], [30, 15, 15]]}, "output":
60}, {"id": 1, "name": "sum", "input": {"isRow": true, "number":
2, "matrix": [[12, 15, 15], [21, 15, 15], [30, 15, 15]]}, "output":
60}, {"id": 1, "name": "sum", "input": {"isRow": true,
"number": 2, "matrix": [[12, 15, 15], [21, 15, 15], [15, 15,
15]]}, "output": 45}, {"id": 2, "name": "avg", "input":
{"isRow": false, "number": 2, "matrix": [[12, 15, 15], [21, 15,
30, 15, 15]]}, "output": 15}, {"id": 2, "name": "avg",
"input": {"isRow": false, "number": 2, "matrix": [[12, 15, 15],
[21, 15, 15], [30, 15, 15]]}, "output": 15}, {"id": 2, "name":
"avg", "input": {"isRow": false, "number": 2, "matrix": [[12, 15,
15], [21, 15, 15], [30, 15, 15]]}, "output": 15}]

```

3. Код LR8.html

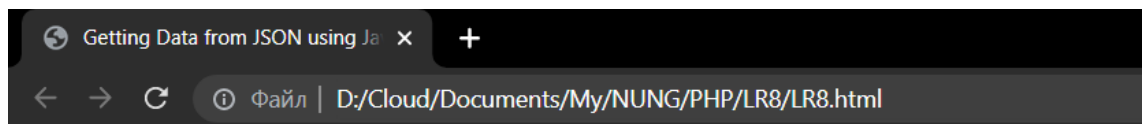
```
<!DOCTYPE html>
<html>
  <head>
    <title>Getting Data from JSON using JavaScript</title>
  </head>
  <body>
    <table id="datatable">
      <thead>
        <tr>
          <th>ID</th>
          <th>Operation</th>
          <th>Input</th>
          <th>Output</th>
        </tr>
      </thead>
      <tbody id="table-rows">
      </tbody>
    </table>

    <script>

      fetch("http://localhost/lr/LR.php")
        .then(res => res.json())
        .then(response => {
          document.getElementById('table-rows').innerHTML
= response.map((item) => {
              return '<tr><td>' + item.id + '</td><td>' +
item.name + '</td><td>' + JSON.stringify(item.input) + '</td><td>' +
item.output + '</td></tr>'
            }).join('');
        });

    </script>
  </body>
</html>
```

4. Результат виконання LR8.html



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

5. Код LR8.2.php

```
<?php
    ini_set('display_errors', 1); ini_set('display_startup_errors',
1); error_reporting(E_ALL);

    $ch = curl_init();

    curl_setopt($ch, CURLOPT_URL,
"http://localhost/lr/LR.php");

    curl_setopt($ch, CURLOPT_RETURNTRANSFER, 1);

    $output = curl_exec($ch);

    curl_close($ch);
    $data_object=json_decode($output);

    $table_body="";
    for($i=0;$i<count($data_object);$i++){
        $table_body.="<tr><td>".$data_object[$i]-
>id."</td><td>".$data_object[$i]-
>name."</td><td>".serialize($data_object[$i]-
>input)."</td><td>".$data_object[$i]->output."</td></tr>";
    }
?>
<html>
    <head>
        <title>LR8</title>
    </head>
    <body>
        <table>
            <thead>
                <tr>
                    <th>ID</th>
                    <th>Operation</th>
                    <th>Input</th>
                    <th>Output</th>
                </tr>
            </thead>
            <tbody>
                <?php echo $table_body; ?>
            </tbody>
        </table>
    </body>
</html>
```

6. Результат виконання LR8.2.php

LR8			
localhost/lr/LR2.php			
ID	Operation	Input	Output
1	sum	O:8:"stdClass":3:{s:5:"isRow";b:1;s:6:"number";i:2;s:6:"matrix";a:3:{i:0;a:3:{i:0;i:12;i:1;i:15;i:2;i:15;}i:1;a:3:{i:0;i:21;i:1;i:15;i:2;i:15;}i:2;a:3:{i:0;i:30;i:1;i:15;i:2;i:15;}}}	60
1	sum	O:8:"stdClass":3:{s:5:"isRow";b:1;s:6:"number";i:2;s:6:"matrix";a:3:{i:0;a:3:{i:0;i:12;i:1;i:15;i:2;i:15;}i:1;a:3:{i:0;i:21;i:1;i:15;i:2;i:15;}i:2;a:3:{i:0;i:30;i:1;i:15;i:2;i:15;}}}	60
1	sum	O:8:"stdClass":3:{s:5:"isRow";b:1;s:6:"number";i:2;s:6:"matrix";a:3:{i:0;a:3:{i:0;i:12;i:1;i:15;i:2;i:15;}i:1;a:3:{i:0;i:21;i:1;i:15;i:2;i:15;}i:2;a:3:{i:0;i:15;i:1;i:15;i:2;i:15;}}}	45
2	avg	O:8:"stdClass":3:{s:5:"isRow";b:0;s:6:"number";i:2;s:6:"matrix";a:3:{i:0;a:3:{i:0;i:12;i:1;i:15;i:2;i:15;}i:1;a:3:{i:0;i:21;i:1;i:15;i:2;i:15;}i:2;a:3:{i:0;i:30;i:1;i:15;i:2;i:15;}}}	15
2	avg	O:8:"stdClass":3:{s:5:"isRow";b:0;s:6:"number";i:2;s:6:"matrix";a:3:{i:0;a:3:{i:0;i:12;i:1;i:15;i:2;i:15;}i:1;a:3:{i:0;i:21;i:1;i:15;i:2;i:15;}i:2;a:3:{i:0;i:30;i:1;i:15;i:2;i:15;}}}	15
2	avg	O:8:"stdClass":3:{s:5:"isRow";b:0;s:6:"number";i:2;s:6:"matrix";a:3:{i:0;a:3:{i:0;i:12;i:1;i:15;i:2;i:15;}i:1;a:3:{i:0;i:21;i:1;i:15;i:2;i:15;}i:2;a:3:{i:0;i:30;i:1;i:15;i:2;i:15;}}}	15