

1. Section covers

- Database class
- Setting up connection
- Initializing files
- Creating the class
- Creating helper methods

2. Setting up the Database connection

Project folder wise config.php er location, admin->includes->new_config.php,

Step 1: From new_config.php,

```
<?php

// Database constants connection

define('DB_HOST', 'localhost');
define('DB_USER', 'root');
define('DB_PASS', '');
define('DB_NAME', 'gallery_db');

$conn = mysqli_connect(DB_HOST, DB_USER, DB_PASS, DB_NAME);

if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
}

// Connection successful
echo "Connected successfully";
```

Step 2: init.php naam e ekta file create kora holo,

```
<?php
    include("new_config.php");
?>
```

Step 3: ekdm header file er upore **init** and **ob_start()** ke include kore dite hobe,

```
<?php ob_start() ?>
<?php include("init.php") ?>
```

* Note: **ob_start()** opens a buffer in which all output is stored. So every time you do an echo, the output of that is added to the buffer.

3. Making it more object oriented structured

Step 1: from **new_config.php**,

```
<?php

// Database constants connection

define('DB_HOST', 'localhost');
define('DB_USER', 'root');
define('DB_PASS', '');
define('DB_NAME', 'gallery_db');
```

Step 2: Creating a new php file named **database.php**, under admin->includes->database.php,

```
<?php

require_once('new_config.php');

class Database{

    public $connection;

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

    public function open_db_connection()
    {
        $this->connection = mysqli_connect(DB_HOST, DB_USER, DB_PASS, DB_NAME);

        if (!$this->connection) {
            die("Connection failed: " . mysqli_connect_error());
        }
    }
}

$database = new Database();
```

Step 3:

Adding this files into init.php,

```
<?php
    include("new_config.php");
    include("database.php");
?>
```

Step 4, finally use it on **header.php**,

```
<?php ob_start() ?>
<?php include("init.php") ?>
```

*PHP require_once() Function: The require_once() function in PHP is used to include one PHP file into another PHP file. It provides us with a feature that if a code from a PHP file is already included in a specified file then it will not include that code again if we use the require_once() function

4. Automatic DB connection setup

Testing in other pages if it is connected,

```
<div class="col-md-12">
  <?php

    if ($database->connection){
      echo "true";
    }

  ?>
</div>
```

This returns output "True".

5. Query Method

Query er jonno alada oop format e ekta function kora holo inside database class e, from **database.php**,

```
public function query($sql)
{
    $result = mysqli_query($this->connection, $sql);

    if (!$result) {
        die("query failed: " . mysqli_error($this->connection));
    }
}
```

Full **database.php** code,

Ekhane **query** function er through te **\$sql** query gula pass hobe,

```
<?php
require_once('new_config.php');

class Database
{
    public $connection;

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

    public function open_db_connection()
    {
        $this->connection = mysqli_connect(DB_HOST, DB_USER, DB_PASS, DB_NAME);

        if (!$this->connection) {
            die("Connection failed: " . mysqli_connect_error());
        }
    }

    public function query($sql)
    {
        $result = mysqli_query($this->connection, $sql);

        if (!$result) {
            die("query failed: " . mysqli_error($this->connection));
        }
    }
}

$databse = new Database();
```

6. Database class helper methods

As a helper function hishebe notun duita function add kora holo under **Database** class e,

```
private function confirm_query($result){
    if (!$result) {
        die("query failed: " . mysqli_error($this->connection));
    }
}

public function escape_string($string){
    return mysqli_real_escape_string($this->connection, $string);
}
```

full **database.php** code,

```
<?php
require_once('new_config.php');

class Database
{
    public $connection;

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

    public function open_db_connection()
    {
        $this->connection = mysqli_connect(DB_HOST, DB_USER, DB_PASS, DB_NAME);

        if (!$this->connection) {
            die("Connection failed: " . mysqli_connect_error());
        }
    }

    public function query($sql)
    {
        $result = mysqli_query($this->connection, $sql);
        return $result;
    }

    private function confirm_query($result){
        if (!$result) {
            die("query failed: " . mysqli_error($this->connection));
        }
    }

    public function escape_string($string){
        return mysqli_real_escape_string($this->connection, $string);
    }

    public function the_insert_id(){
        return mysqli_insert_id($this->connection);
    }
}
```

```
$database = new Database();
```