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Web Application Development
Week Summary

This module helped to refresh a lot on previous concepts seen during last years class (Advanced Programming)

Some of the code in this document are PHP code snippet that are for connecting to a PostgreSQL database using the PDO (PHP Data Objects) extension. I'll do a more detailed explanation of what each portions of the codes are.

The firsts thing was the **Authentication Credentials**, this is what let us connect to the database, so by putting the right credentials we can refer to a specific database, connect to it and retrieve its information, in my case, these are my credentials

```
$host = "localhost";
$port = "5432";
$dbname = "library";
$user = "postgres";
$password = "";
```

Connection String:

```
php
Copy code
$dsn = "pgsql:host=$host;dbname=$dbname";
```

The DSN is created, which specifies the database driver (in this case, `pgsql` for PostgreSQL), the host, and the database name. This string is used by PDO to establish a connection.

Try-Catch Block:

```
{
    //Session
    $pdo = new PDO($dsn, $user, $password);
    //Set an error alert
    $pdo->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);
    //Echo Messages
    echo "Successfully connected to the database";
} catch (PDOException $e) {
    echo "Connection Failed: " . $e->getMessage();
}
```

- The code attempts to establish a connection to the PostgreSQL database using the PDO constructor, passing in the DSN, username, and password.

- If the connection is successful, it sets the error reporting mode for the PDO object to throw exceptions if an error occurs (`PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION`), which is useful for debugging.
- A success message ("Successfully connected to the database") is echoed if the connection is established without errors.
- If there is an error during the connection process, it is caught in the `catch` block, and an error message is displayed with the details of the exception (`$e->getMessage()`), indicating why the connection failed.

For the api.php file

in that script it initializes a cURL session to make a GET request to a specified API endpoint, handles potential errors, processes the JSON response from the API, sets the appropriate content type for the output, and finally closes the cURL session. This allows the PHP script to interact with the API and return data to the client in a structured JSON format.