Process to create a simple DBMS

Tools used

Vs code (IDE)

XAMPP

MongoDB compass

Frontend

Html

CSS

Backend

PHP

NoSQL

; Composer

Results / Deliverables

In http://localhost/mongp/index.php

i.   User Interface for Pupils collection

ii.   MongoDB Compass Dashboard

Connecting the UI to MongoDB

Environment setup

Problem 1: While installing mongoDB PHP drivers and extensions

COMMAND 1: composer require mongodb/mongodb

Error: *Cannot use mongodb/mongodb's latest version 1.17.1 as it requires ext-mongodb ^1.17.0 which is missing from your platform.*

<mark>The available drivers were for version 1.13.0 and below.</mark>

Trial Solutions

   i.   Check if php modules are installed; ***php -m*** - present

   ii.   Check php version; ***php -v -*** version 8.3.4

iii.   Check thread safety to ensure it coincide with php drives; php -i | findstr "Thread Safety"

      Thread Safety => enabled

      Thread API => Windows Threads

   iv. **Set up drives (download dll – copy to php, ext file in htdocs - update php.ini file - using ('extension=php_mongodb.dll') done. THIS INSTALLATION PROCEDURE WORKED**.

   v.   Trial and dll(s) tests at ***ext-mongodb ^1.17.0 as recommended through cmd prompt as feedback***

      i) php_mongodb-1.17.0-7.4-ts-x64 - Same error as above

      ii) php_mongodb-1.17.0-8.0-ts-x64 - Same error as above

      iii) php_mongodb-1.17.0-8.1-ts-x64 - Same error as above

      iv) php_mongodb-1.17.0-8.2-ts-x64 – ***WORKED*(compatible drives)***

      v) php_mongodb-1.17.0-8.3-ts-x64 – Same error as above

Sample Results and suggestions

Error: *Package mongodb/mongodb has requirements incompatible with your PHP version, PHP extensions and Composer version: - mongodb/mongodb 1.17.1 requires ext-mongodb ^1.17.0 but it is not present.*

Above was just a discrepancy in mapping PHP drivers with MongoDB version

Final hack to solve the problem

Suppressing the error

Command: composer require mongodb/mongodb --ignore-platform-reqs (worked)

Drivers were added successfully

```
C:\xampp\htdocs\mongp>composer require mongodb/mongodb --ignore-platform-reqs
./composer.json has been created
Running composer update mongodb/mongodb
Loading composer repositories with package information
Updating dependencies
Lock file operations: 5 installs, 0 updates, 0 removals
  - Locking jean85/pretty-package-versions (2.0.6)
  - Locking mongodb/mongodb (1.17.1)
  - Locking psr/log (3.0.0)
  - Locking symfony/polyfill-php80 (v1.29.0)
  - Locking symfony/polyfill-php81 (v1.29.0)
Writing lock file
Installing dependencies from lock file (including require-dev)
Package operations: 5 installs, 0 updates, 0 removals
  - Downloading symfony/polyfill-php81 (v1.29.0)
  - Downloading symfony/polyfill-php80 (v1.29.0)
  - Downloading psr/log (3.0.0)
  - Downloading jean85/pretty-package-versions (2.0.6)
  - Downloading mongodb/mongodb (1.17.1)
  - Installing symfony/polyfill-php81 (v1.29.0): Extracting archive
  - Installing symfony/polyfill-php80 (v1.29.0): Extracting archive
  - Installing psr/log (3.0.0): Extracting archive
  - Installing jean85/pretty-package-versions (2.0.6): Extracting archive
  - Installing mongodb/mongodb (1.17.1): Extracting archive
Generating autoload files
2 packages you are using are looking for funding.
```

Tried to suppress the extensions even further using the newest php_mongodb-1.17.3-7.4 thread safety version to compliment php version and mongo version.

```
C:\xampp\htdocs\mongp>composer require mongodb/mongodb --ignore-platform-reqs
./composer.json has been updated
Running composer update mongodb/mongodb
Loading composer repositories with package information
Updating dependencies
Nothing to modify in lock file
Writing lock file
Installing dependencies from lock file (including require-dev)
Nothing to install, update or remove
Generating autoload files
2 packages you are using are looking for funding.
Use the `composer fund` command to find out more!
No security vulnerability advisories found.
Using version ^1.17 for mongodb/mongodb
```
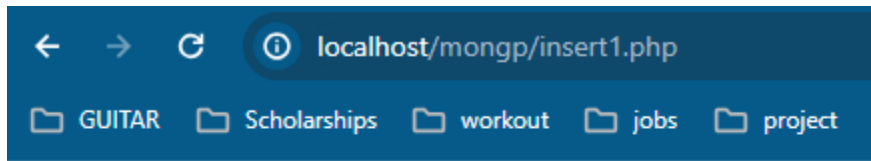
However, even with the right connection snippet the system was still asking for the correct MongoDB PHP drivers and extensions which unfortunately I could not trace. Error below is as a result of some confusion between the MongoDB version and the MongoDB PHP drivers and extensions when *submit* button is clicked.

Error: fatal error: *Uncaught Error: Class "MongoDB\Driver\Manager" not found in*

C:\xampp\htdocs\mongp\vendor\mongodb\mongodb\src\Client.php:117 Stack trace:

#0 C:\xampp\htdocs\mongp\insert.php(7): MongoDB\Client-

>__construct('mongodb://local...') #1 {main} thrown

*in **C:\xampp\htdocs\mongp\vendor\mongodb\mongodb\src\Client.php** on line **117***

Above error is related to the MongoDB PHP driver as we have been encountering, it is advisable to keep experimenting with drivers until the right ones are configured, although not sure how long that might take.
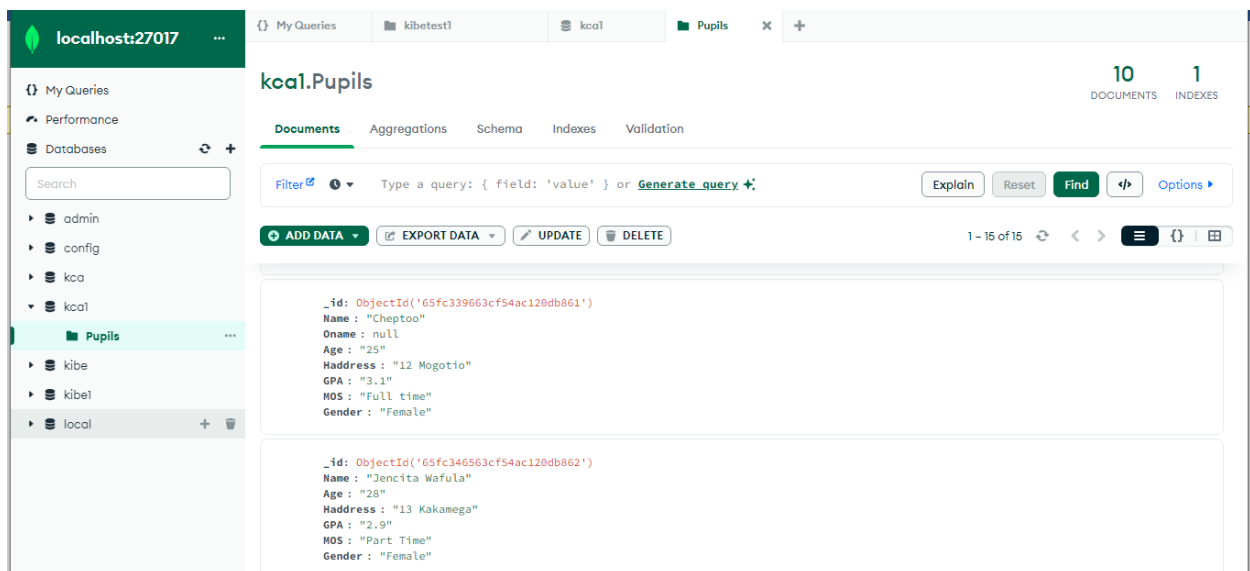
IMPLEMENTATION

Task: create a MongoDB database and a form to populate data in the database.

Felicitations Kibe Data stored

Results 1: Connection established and Data sent to MongoDB.

Results1: MongoDB data.

Appendix

1) Connection insert1.php

```php
insert1.php > ...
1   <?php
2   // Include the MongoDB PHP library
3   require 'vendor/autoload.php';
4   // Create a MongoDB connection
5   $client = new MongoDB\Client;
6
7   $db = $client->kca1;
8   $collection = $db->Pupils;
9
10  if ($_POST) {
11      $insert = array (
12          'Name' => $_POST['name'],
13        //  'name' => $_POST['sname'],
14          'Age' => $_POST['age'],
15          'Haddress' => $_POST['ha'],
16          'GPA' => $_POST['gpa'],
17          'MOS' => $_POST['mod'],
18          'Gender' => $_POST['gender'],
19      );
20
21      $insertResult = $collection->insertOne($insert);
22
23      if ($insertResult->getInsertedCount() > 0) {
24          echo "Felicitations Kibe Data stored";
25      } else {
26          echo "Error: Failed to insert data";
27      }
28  } else {
29      echo "Code has some issues Sam";
30  }
31
32  ?>
```

1) User interface index.php

a) Section 1

```
Index.php > html > body > div.center > form
1    <!DOCTYPE html>
2    <html>
3
4    <head>
5        <style>
6            .center {
7                text-align: center;
8            }
9
10            form {
11                display: inline-block;
12                text-align: left;
13            }
14        </style>
15    </head>
16
17    <body>
18        <div class="center">
19            <h1>Pupil Details</h1>
20            <form action="insert1.php" method="POST">
21                <label for="name">Full Name(s):</label>
22                <input type="text" id="name" name="name"><br><br>
23
24                <label for="age">Age:</label>
25                <input type="text" id="age" name="age"><br><br>
26
27                <label for="ha">Home Address:</label>
28                <input type="text" id="ha" name="ha"><br><br>
29
30                <label for="gpa">GPA:</label>
31                <input type="text" id="gpa" name="gpa"><br><br>
32
```

b) Section 2.

```
32
33                <label for="mod">Mode of Study:</label>
34                <input type="text" id="mod" name="mod"><br><br>
35
36                <label for="female">Gender</label>
37                <input type="text" id="gender" name="gender"><br><br>
38
39                <button type="submit" value="Submit">Submit</button>
40                <button type="submit" name="submit">View Details</button>
41            </form>
42        </div>
43    </body>
44
45    </html>
46
```