

Situation-Based Problem - Technical Assessment

Backend Developer (PHP Legacy Code)

1. Create a simple database to store patient, doctor, medication, patient_medication for storing patients prescriptions.
 - a. patient, doctor and medication tables will have two columns, id, name
 - b. medication table will also have dose column
 - c. You will need to determine the structure for the patient_medication table where you will need to store the quantity and frequency of medications that are prescribed by doctors to patients. Also we will need start and end date of taking medication
 - d. Each of the table should have columns for storing created, updated and deleted dates
2. Write DBConnection class which can handle two type of connections READ and WRITE
3. DBConnection class should have following methods

```
class DBConnection
{
    function getInstance () { }
    function query() { }
    function connect () { }
}
```
4. Write abstract Database class which will be used to perform queries

```
class Database
{
    function connect() { }
    function disconnect() { }
    function select() { }
    function insert() { }
    function delete() { }
    function update() { }
}
```
5. Generate some dummy data and populate tables
6. Create index for the tables
7. Using Database class fetch data from the database
 - a. Get all patients that are taking one particular medication
 - b. Get all patients and prescriptions count for current year ordered by
 - c. Get all medications for one particular patient. Returned data should include patient name, doctor name, medication and prescription information
 - d. Get all patients that prescribed more than one medication for the previous and current year