**Class: database**

**Description:**

Provides a simplified interface for database connections and SQL operations using PDO, supporting transactions, error handling, and prepared statements.

**Properties:**

* **$dsn (private):** Data Source Name for database connection.
* **$username (private):** Database connection username.
* **$password (private):** Database connection password.
* **$pdo (private):** PDO object for database interaction.

**Constructor:**

* **\_\_construct():** Initializes the database connection and calls connect(). Throws PDOException on failure.

**Methods:**

* **connect() (private):** Establishes a PDO connection with error handling.
* **query($sql, $params = []):** Executes a SELECT query with bound parameters. Returns a PDOStatement object.
* **execute($sql, $params = []):** Executes an INSERT, UPDATE, or DELETE query with bound parameters. Returns a boolean.
* **getLastInsertId():** Returns the last inserted row ID.
* **close():** Closes the PDO connection.

**Class: user**

**Description:**

Manages user registration and login using the database class for secure SQL queries.

**Properties:**

* **$db (private):** An instance of the database class.

**Constructor:**

* **\_\_construct(database $db):** Initializes the user class with a database connection.

**Methods:**

* **register($username, $email, $password):** Registers a new user. Returns true on success, false otherwise.
* **login($username, $password):** Authenticates a user. Returns user data on success, false on failure.

**Class: event**

**Description:**

Handles CRUD operations for events using the database class.

**Properties:**

* **$db (private):** An instance of the database class.

**Constructor:**

* **\_\_construct(database $db):** Initializes the event class with a database connection.

**Methods:**

* **create($Uid, $eventName, $description, $DateandTime, $Location):** Adds a new event. Returns true on success.
* **read($Uid):** Retrieves event details by ID. Returns a PDOStatement object.
* **edit($Eid, $eventName, $description, $DateandTime, $Location):** Updates event details.
* **delete($Eid):** Deletes an event by ID.
* **getAllEvents():** Retrieves all events. Returns a PDOStatement object.

**Class: session**

**Description:**

Manages PHP session operations with static methods.

**Methods:**

* **start():** Starts a session.
* **destroy():** Destroys the session.
* **set($key, $value):** Sets a session variable.
* **get($key):** Retrieves a session variable.
* **remove($key):** Removes a session variable.
* **clearall():** Clears all session variables.
* **isLoggedIN($key):** Checks if a session variable is set.
* **exists($key):** Checks if a session variable exists.