

ΑΝΑΦΟΡΑ ΒΑΣΕΩΝ ΔΕΔΟΜΕΝΩΝ

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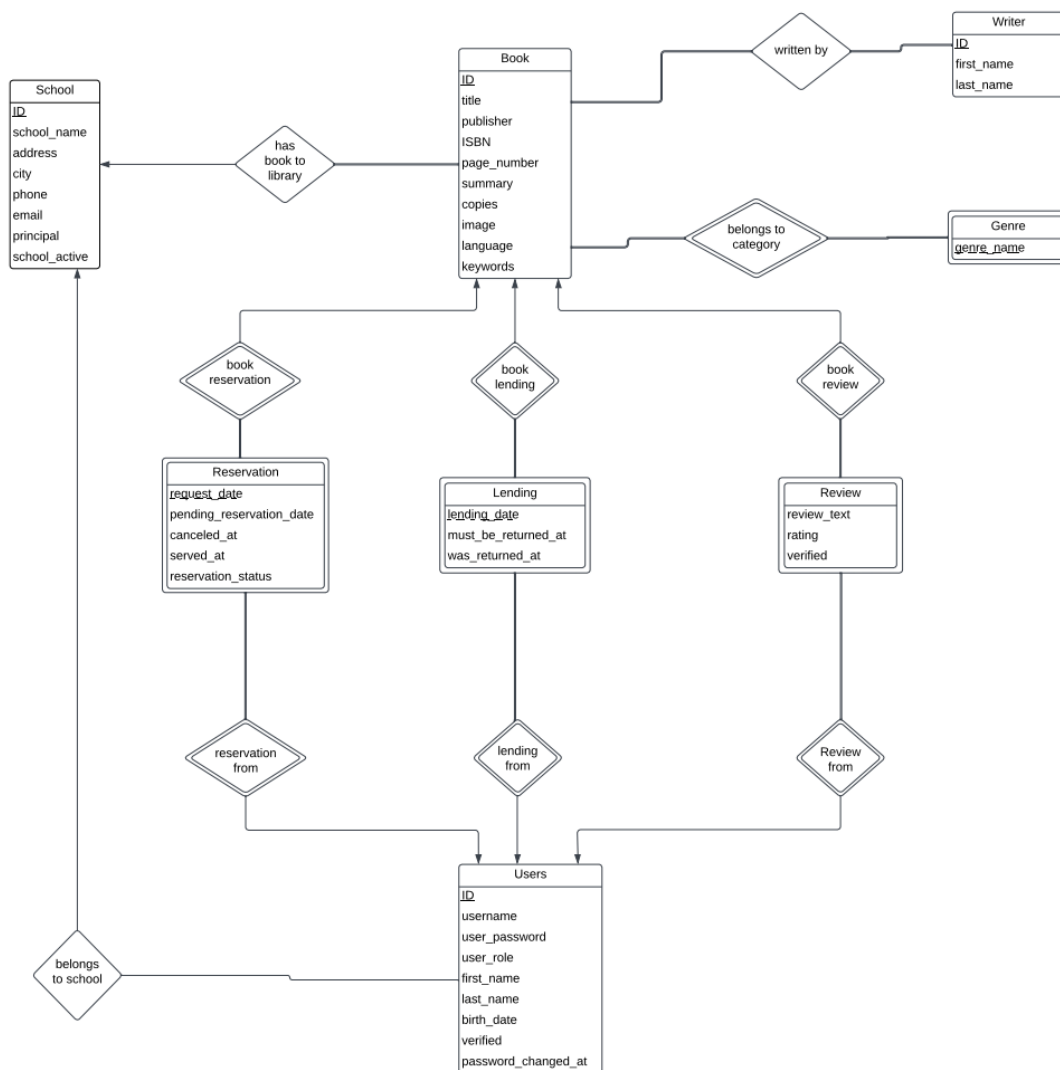
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Εκφώνηση

Ζητούμενο της εργασίας είναι η υλοποίηση ενός συστήματος αποθήκευσης και διαχείρισης πληροφοριών που είναι απαραίτητες για τη λειτουργία σχολικών βιβλιοθηκών. Κάθε δημόσιο σχολείο που χρησιμοποιεί το συγκεκριμένο σύστημα έχει καταχωρημένους χρήστες και πρόσβαση (οι χρήστες του) στα βιβλία που ανήκουν σε αυτό. Κάθε χρήστης μπορεί να κάνει κρατήσεις, να δανείζεται και να αξιολογεί βιβλία καθώς επίσης να εισάγει και διαχειρίζεται πληροφορίες του συστήματος ανάλογα με το ρόλο του.

ER & Σχεσιακό διάγραμμα της ΒΔ με αιτιολόγηση και ευρετήρια

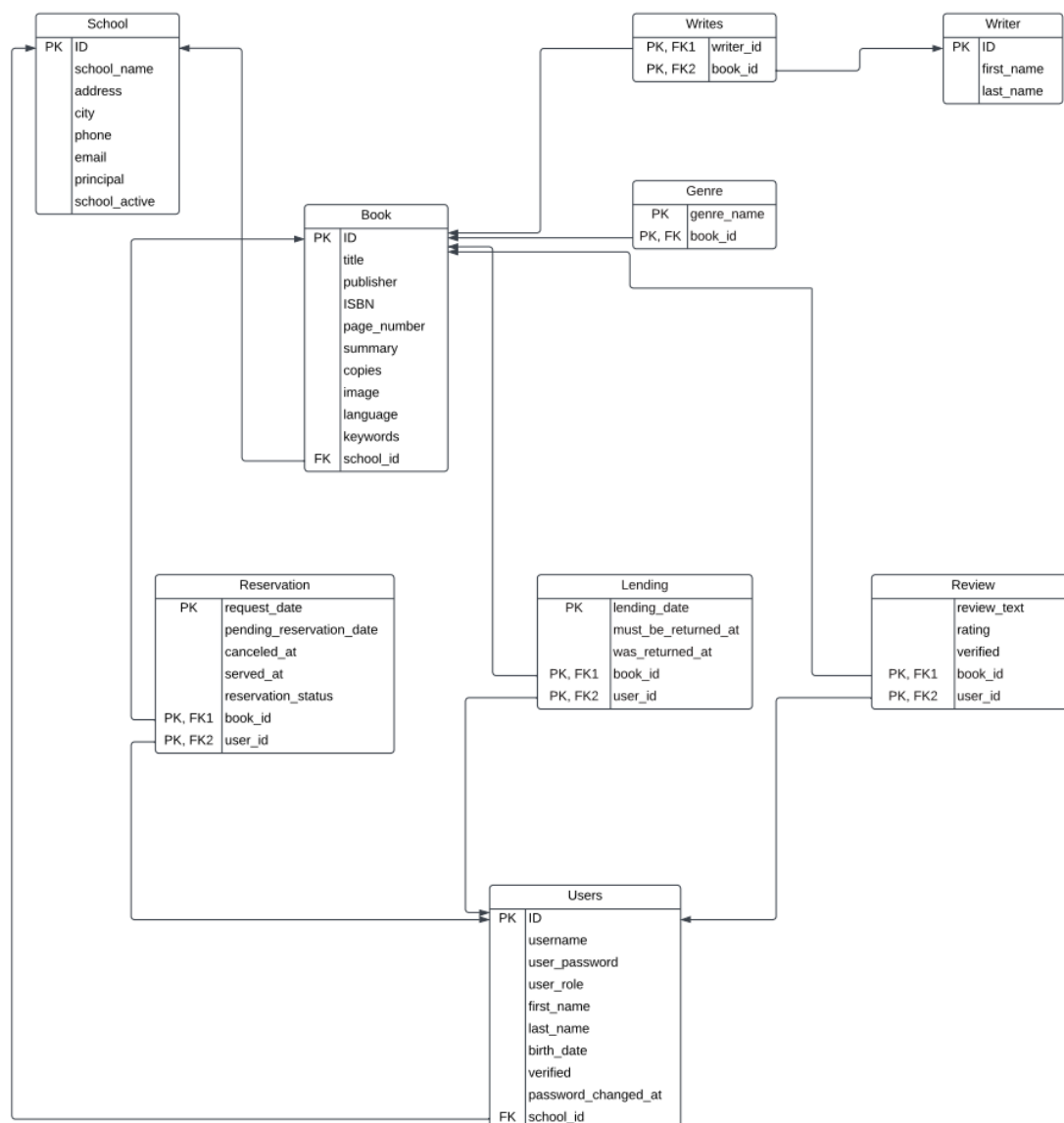
ER Διάγραμμα



Στην βάση μας έχουμε 8 entity sets: σχολεία, βιβλία, συγγραφείς, κατηγορίες βιβλίων, κρατήσεις, δανεισμούς, αξιολογήσεις και χρήστες με τα αντίστοιχα χαρακτηριστικά τους καθώς και τις σχέσεις που τα συνδέουν. Από το παραπάνω διάγραμμα οντοτήτων σχέσεων προκύπτει το σχεσιακό διάγραμμα που ακολουθεί.

Σχεσιακό Διάγραμμα

Τα entity sets του ER διαγράμματος έχουν μετατραπεί σε πίνακες με στήλες τα αντίστοιχα χαρακτηριστικά τους. Οι σχέσεις one-to-many του ER απεικονίζονται πλέον με τη χρήση ξένων κλειδιών στους πίνακες των οντοτήτων που συνδέονταν στην μεριά των πολλών στη αντίστοιχη σχέση τους, ενώ οι σχέσεις many-to-many έχουν αντικατασταθεί από έναν επιπλέον πίνακα με στήλες τα primary keys των οντοτήτων που συνδέουν. (Στην περίπτωση του entity set genre η σχέση με το entity set book καθώς και η ίδια η οντότητα έχουν αντικατασταθεί με ένα table με στήλες το genre_name και το book_id ως ξένο κλειδί.)



Από το παραπάνω σχεσιακό διάγραμμα δημιουργούμε τα αντίστοιχα tables στην SQL με τα κατάλληλα constraints και indexes που θα βοηθήσουν στην καλύτερη αποθήκευση και διαχείριση των πληροφοριών στη βάση.

Indexes

Τα ευρετήρια συμβάλουν στην αύξηση της αποδοτικότητας της βάσης καθώς με τη χρήση τους οι ανάκτηση των δεδομένων γίνεται πολύ πιο γρήγορα. Στην MySQL για τη στήλη που αποτελεί primary key για τον αντίστοιχο πίνακα καθώς και για τις στήλες που έχουν unique constraint ή είναι unique key δημιουργούνται αυτόματα indexes. Επίσης το ευρετήριο ενός composite key μπορεί να χρησιμοποιηθεί για κάθε υποσύνολο στηλών που διατηρεί τη σειρά των στηλών του. Για αυτόν το λόγο πρέπει να επιλέξουμε προσεκτικά ποια στήλη θα είναι πρώτη καθώς τα indexes δε θα φανούν χρήσιμα σε κάθε αναζήτηση που γίνεται με βάση κάποια άλλη στήλη (όχι την πρώτη). Επιπλέον ορίζουμε ως indexes και foreign keys που δεν είναι primary keys. Αυτό είναι χρήσιμο αφού τα primary keys αποτελούν το αναγνωριστικό με το οποίο γίνονται οι περισσότερες αναζητήσεις καθώς και τα foreign keys χρησιμοποιούνται συχνά σε join πινάκων και είναι απαραίτητη η γρήγορη προσπέλαση αυτών των δεδομένων.

Αναλυτικά για κάθε πίνακα

Για την δημιουργία των παρακάτω πινάκων έγινε χρήση του not null constraint σε όλα τα primary keys καθώς δεν μπορούν να πάρουν null τιμές, σε όλα τα foreign keys για λόγους συνέπειας των δεδομένων (εκτός από την περίπτωση του foreign key school_id στον πίνακα Users όπου η τιμή του μπορεί να είναι null αφού ο χρήστης με ρόλο super-admin δεν ανήκει σε κανένα σχολείο) αλλά και όπου ήταν λογικά απαραίτητο.

School

Το ID είναι primary key καθώς είναι μοναδικό για κάθε σχολείο.

Τα school_name, phone, email κάθε σχολείου θέλουμε να είναι μοναδικά για προφανείς λόγους.

Το πεδίο school_active θέλουμε η default τιμή του να είναι μηδέν, δηλαδή ανενεργό, μέχρι να προστεθεί κάποιος user για το συγκεκριμένο σχολείο με ρόλο 'school_admin' και να γίνει verified. Τότε το σχολείο ενεργοποιείται αυτόματα (school_active = 1) με χρήση trigger για αυτό επίσης ορίζουμε και το συγκεκριμένο πεδίο ως index.

Book

Το ID είναι primary key καθώς είναι μοναδικό για κάθε βιβλίο.

Ο συνδυασμός title και school_id θέλουμε να είναι μοναδικός αφού το πλήθος των ίδιων βιβλίων σε κάθε σχολείο φαίνεται από το πεδίο copies (και προφανώς copies >= 0).

Το πεδίο school_id είναι foreign key που αναφέρεται στο table school και αντιστοιχίζει τους δύο πίνακες με σχέση ένα (school) προς πολλά (book).

Writer

Το ID είναι primary key καθώς είναι μοναδικό για κάθε συγγραφέα.

Writes

Ο συνδυασμός book_id και writer_id είναι primary key αφού είναι μοναδικοί.

Τα πεδία book_id και writer_id είναι foreign keys για το table writes.

Ο πίνακας writes αναπαριστά τη σχέση written by στο ER diagram που συσχετίζει τα entity sets book και writer με σχέση πολλά προς πολλά.

Genre

Ο συνδυασμός book_id και genre είναι primary key αφού είναι μοναδικοί.

Το πεδίο book_id είναι foreign key που αναφέρεται στο table book και αντιστοιχίζει τους δύο πίνακες με σχέση πολλά (genre) προς πολλά (book).

Users

Το ID είναι primary key καθώς είναι μοναδικό για κάθε χρήστη.

Το username είναι unique για να είναι εύκολη η αναζήτηση user με αυτό, καθώς χρησιμοποιείται συχνά για την επαλήθευση της σύνδεσης του.

Κάθε user έχει ένα από τους ρόλους 'super-admin', 'school-admin', 'teacher', 'student' με την αντίστοιχη πρόσβαση σε δεδομένα και λειτουργίες της εφαρμογής.

Το πεδίο verified έχει default τιμή 0 η οποία αλλάζει ανάλογα με το ρόλο του user. Αν ο χρήστης που προστίθεται είναι ο 'super-admin' τότε με χρήση trigger το πεδίο verified γίνεται αυτόματα 1. Σε κάθε άλλη περίπτωση ο χρήστης παραμένει not verified μέχρι ο 'super-admin' (στην περίπτωση του 'school-admin') ή ο 'school-admin' (για teacher ή student) να τον κάνει verified.

Το πεδίο changed_password_at έχει default τιμή null μέχρι ο χρήστης να αλλάξει πρώτη φορά password.

Το πεδίο school_id είναι foreign key που αναφέρεται στο table school και αναπαριστά τη σχέση belongs to του ER διαγράμματος συσχετίζοντας τα δύο σύνολα οντοτήτων με σχέση ένα (σχολείο) προς πολλά (χρήστες). Εκτός από την περίπτωση του 'super-admin' που αναφέραμε προηγουμένως.

Reservation

Ο συνδυασμός των πεδίων `book_id`, `user_id`, `request_date` είναι το primary key αφού είναι μοναδικός, γιατί κάθε user μπορεί να ξανακάνει κράτηση του ίδιου βιβλίου σε άλλη χρονική στιγμή.

Το πεδίο `request_date` έχει default τιμή την ημερομηνία που γίνεται η αίτηση για κράτηση ενός βιβλίου.

Το πεδίο `pending_reservation_date` έχει default null και θα πάρει ως τιμή την ημερομηνία που θα τεθεί σε αναμονή το αίτημα για κράτηση αν δεν υπάρχουν διαθέσιμα αντίτυπα του βιβλίου που ζητείται.

Το πεδίο `canceled_at` έχει default τιμή null και θα πάρει ως τιμή την ημερομηνία που πραγματοποιήθηκε η ακύρωση κράτησης από τον εκπαιδευτικό ή τον μαθητή που έκανε το αίτημα. Σε περίπτωση που η κατάσταση (`reservation_status`) της κράτησης ή του αιτήματος κράτησης δεν έχει αλλάξει για χρονικό διάστημα μεγαλύτερο της μιας εβδομάδας τότε η κράτηση ή το αίτημα ακυρώνονται αυτόματα.

Το πεδίο `served_at` έχει default τιμή null, η οποία θα αλλάξει στην ημερομηνία εξυπηρέτησης της κράτησης μόλις πραγματοποιηθεί ο δανεισμός του συγκεκριμένου βιβλίου.

Το πεδίο `reservation_status` έχει τιμή ανάλογα με την κατάσταση της κράτησης:

0 -> (default τιμή) αίτημα κράτησης

1 -> μη διαθέσιμα αντίτυπα (αναμονή)

2 -> δανεισμός βιβλίου

3 -> ακύρωση κράτησης

Τα πεδία `user_id` και `book_id` αποτελούν ξένα κλειδιά που αναφέρονται στο table `user` και `book` και αναπαριστούν τις σχέσεις `reservation_from` και `book_reservation` του ER διαγράμματος αντίστοιχα.

Lending

Ο συνδυασμός των πεδίων `book_id`, `user_id` και `lending_date` είναι το primary key αφού είναι μοναδικός.

Το πεδίο `lending_date` έχει default τιμή την ημερομηνία που πραγματοποιείται ο δανεισμός του συγκεκριμένου βιβλίου.

Το πεδίο `must_be_returned_at` έχει default τιμή ένα μήνα μετά την ημερομηνία δανεισμού.

Το πεδίο `was_returned_at` έχει default τιμή null, η οποία θα αλλάξει μόλις επιστραφεί το συγκεκριμένο βιβλίο.

Τα πεδία `user_id` και `book_id` αποτελούν ξένα κλειδιά που αναφέρονται στο table `user` και `book` και αναπαριστούν τις σχέσεις `lending_from` και `book_lending` του ER διαγράμματος αντίστοιχα.

Review

Ο συνδυασμός των πεδίων `book_id`, `user_id` είναι το primary key αφού είναι μοναδικός, γιατί κάθε user μπορεί να γράψει μόνο μια αξιολόγηση για κάθε βιβλίο που έχει δανειστεί.

Το πεδίο `verified` έχει default τιμή μηδέν, η οποία αλλάζει αυτόματα σε 1 με χρήση trigger αν ο χρήστης που αξιολογεί το βιβλίο είναι εκπαιδευτικός, ενώ παραμένει 0 μέχρι ο `school_admin` να την κάνει `verified` (δηλ, 1) αν ο χρήστης είναι μαθητής.

Το βαθμολογικό σχήμα έχει κλίμακα από το 1 έως το 5 ως ακέραιοι αριθμοί.

Τα πεδία `user_id` και `book_id` αποτελούν ξένα κλειδιά που αναφέρονται στο table `user` και `book` και αναπαριστούν τις σχέσεις `review_from` και `book_review` του ER διαγράμματος αντίστοιχα.

DDL + DML scripts

DDL

```
DROP DATABASE IF EXISTS <db_name>;
```

```
CREATE DATABASE <db_name>;
```

```
USE <db_name>;
```

```
CREATE TABLE School (  
    ID INT NOT NULL AUTO_INCREMENT,  
    school_name VARCHAR(255) NOT NULL UNIQUE,  
    address VARCHAR(255) NOT NULL,  
    city VARCHAR(255) NOT NULL,  
    phone VARCHAR(255) NOT NULL UNIQUE,  
    email VARCHAR(255) NOT NULL UNIQUE,  
    principal VARCHAR(255) NOT NULL,  
    school_active BIT NOT NULL DEFAULT(0),  
    PRIMARY KEY (ID),  
    INDEX school_active_index (school_active)  
);
```

```
CREATE TABLE Book (  
    ID INT NOT NULL AUTO_INCREMENT,  
    title VARCHAR(255) NOT NULL,  
    publisher VARCHAR(255) NOT NULL,  
    ISBN VARCHAR(255) NOT NULL,  
    page_number INT NOT NULL,  
    summary VARCHAR(1000) NOT NULL,  
    copies INT NOT NULL,  
    image VARCHAR(255) NOT NULL,  
    lang VARCHAR(255) NOT NULL,  
    keywords VARCHAR(255) NOT NULL,  
    school_ID INT NOT NULL,  
    PRIMARY KEY (ID),  
    UNIQUE KEY (title, school_id),  
    FOREIGN KEY (school_ID) REFERENCES School(ID) ON DELETE RESTRICT ON UPDATE  
CASCADE,  
    CONSTRAINT CHECK (copies>=0),
```



```

        INDEX index_book_school (school_ID)
    );

CREATE TABLE Writer (
    ID INT NOT NULL AUTO_INCREMENT,
    first_name VARCHAR(255) NOT NULL,
    last_name VARCHAR(255) NOT NULL,
    PRIMARY KEY (ID)
);

CREATE TABLE Writes (
    writer_ID INT NOT NULL,
    book_ID INT NOT NULL,
    PRIMARY KEY (writer_ID, book_ID),
    FOREIGN KEY (writer_ID) REFERENCES Writer(ID) ON DELETE RESTRICT ON UPDATE
    CASCADE,
    FOREIGN KEY (book_ID) REFERENCES Book(ID) ON DELETE RESTRICT ON UPDATE CASCADE,
    INDEX index_book_written (book_ID)
);

CREATE TABLE Genre (
    book_ID INT NOT NULL,
    genre VARCHAR(255) NOT NULL,
    PRIMARY KEY (genre, book_ID),
    FOREIGN KEY (book_ID) REFERENCES Book(ID) ON DELETE RESTRICT ON UPDATE CASCADE,
    INDEX index_book_genre (book_ID)
);

CREATE TABLE Users (
    ID INT NOT NULL AUTO_INCREMENT,
    username VARCHAR(255) NOT NULL UNIQUE,
    user_password VARCHAR(255) NOT NULL,
    user_role ENUM('super-admin', 'school-admin', 'teacher', 'student') NOT NULL,
    first_name VARCHAR(255) NOT NULL,
    last_name VARCHAR(255) NOT NULL,
    birth_date DATETIME NOT NULL,
    school_ID INT DEFAULT(NULL),
    verified BIT NOT NULL DEFAULT(0),
    changed_password_at DATETIME DEFAULT(NULL),
    PRIMARY KEY (ID),
    FOREIGN KEY (school_ID) REFERENCES School(ID) ON DELETE RESTRICT ON UPDATE
    CASCADE,
    INDEX index_user_school (school_ID)
);

CREATE TABLE Reservation (
    user_ID INT NOT NULL,
    book_ID INT NOT NULL,
    request_date DATETIME NOT NULL DEFAULT(NOW()),
    pending_reservation_date DATETIME DEFAULT(NULL),
    canceled_at DATETIME DEFAULT(NULL),
    served_at DATETIME DEFAULT(NULL),
    reservation_status INT NOT NULL DEFAULT(0),
    PRIMARY KEY (user_ID, book_ID, request_date),
    FOREIGN KEY (user_ID) REFERENCES Users(ID) ON DELETE RESTRICT ON UPDATE CASCADE,
    FOREIGN KEY (book_ID) REFERENCES Book(ID) ON DELETE RESTRICT ON UPDATE CASCADE,
    INDEX index_reserv_book (book_ID, user_ID)
);

```

```

);

CREATE TABLE Lending (
    user_ID INT NOT NULL,
    book_ID INT NOT NULL,
    lending_date DATETIME NOT NULL DEFAULT(NOW()),
    must_be_returned_at DATETIME NOT NULL DEFAULT(DATE_ADD(NOW(),INTERVAL 1 MONTH)),
    was_returned_at DATETIME DEFAULT(NULL),
    PRIMARY KEY (user_ID, book_ID, lending_date),
    FOREIGN KEY (user_ID) REFERENCES Users(ID) ON DELETE RESTRICT ON UPDATE CASCADE,
    FOREIGN KEY (book_ID) REFERENCES Book(ID) ON DELETE RESTRICT ON UPDATE CASCADE,
    INDEX index_lend_book (book_ID, user_ID)
);

CREATE TABLE Review (
    user_ID INT NOT NULL,
    book_ID INT NOT NULL,
    review VARCHAR(255) NOT NULL,
    rating INT NOT NULL,
    verified BIT NOT NULL DEFAULT(0),
    PRIMARY KEY (user_ID, book_ID),
    FOREIGN KEY (user_ID) REFERENCES Users(ID) ON DELETE RESTRICT ON UPDATE CASCADE,
    FOREIGN KEY (book_ID) REFERENCES Book(ID) ON DELETE RESTRICT ON UPDATE CASCADE,
    CHECK (rating<=5 AND rating>=0),
    INDEX index_review_book (book_ID, user_ID)
);

CREATE VIEW activeUsers AS
(SELECT u.* FROM Users u JOIN School s ON u.school_ID=s.ID WHERE s.school_active=1)
UNION
(SELECT * FROM Users WHERE user_role='super-admin');

CREATE VIEW verifiedUsers AS
SELECT * FROM activeUsers WHERE verified=1;

DELIMITER $$
CREATE TRIGGER update_user_verification
BEFORE INSERT ON Users
FOR EACH ROW
BEGIN
    IF NEW.user_role = 'super-admin' THEN
        SET NEW.verified = 1;
    END IF;
END$$
DELIMITER ;

DELIMITER $$
CREATE TRIGGER update_review_verification
BEFORE INSERT ON Review
FOR EACH ROW
BEGIN
    IF (SELECT user_role FROM Users WHERE ID=New.user_id)='teacher' THEN
        SET New.verified = 1;
    END IF;
END$$
DELIMITER ;

```

```

DELIMITER $$
CREATE TRIGGER make_school_active
BEFORE INSERT ON Users
FOR EACH ROW
BEGIN
    IF (NEW.user_role = 'school-admin' AND
        (SELECT COUNT(*) FROM Users WHERE (user_role='school-admin'AND
school_ID=NEW.school_ID))=0) THEN
        UPDATE School SET school_active=1 WHERE ID=NEW.school_ID;
    END IF;
END$$
DELIMITER ;

DELIMITER $$
CREATE TRIGGER make_school_inactive
AFTER DELETE ON Users
FOR EACH ROW
BEGIN
    IF (OLD.user_role = 'school-admin' AND
        (SELECT COUNT(*) FROM Users WHERE (user_role='school-admin'AND
school_ID=OLD.school_ID))=0) THEN
        UPDATE School SET school_active=0 WHERE ID=OLD.school_ID;
    END IF;
END$$
DELIMITER ;

DELIMITER //
CREATE TRIGGER hash_password_before_insert BEFORE INSERT ON Users
FOR EACH ROW
BEGIN
    SET NEW.user_password =
SHA2(CONCAT('kimnamjoonkimseokjinminyoongijunhoseokparkjiminkimtaehyungjeonjungkookbt
s',
        NEW.user_password), 256);
END;

CREATE TRIGGER hash_password_before_update BEFORE UPDATE ON Users
FOR EACH ROW
BEGIN
    IF OLD.user_password <> NEW.user_password AND OLD.user_password <>
SHA2(CONCAT('kimnamjoonkimseokjinminyoongijunhoseokparkjiminkimtaehyungjeonjungkookbt
s', NEW.user_password), 256) THEN
        SET NEW.user_password =
SHA2(CONCAT('kimnamjoonkimseokjinminyoongijunhoseokparkjiminkimtaehyungjeonjungkookbt
s',
            NEW.user_password), 256);
    END IF;
END;
DELIMITER ;

DELIMITER $$
CREATE TRIGGER add_three_hours_to_birth_date_insert
BEFORE INSERT ON users
FOR EACH ROW
BEGIN
    SET NEW.birth_date = DATE_ADD(NEW.birth_date, INTERVAL 3 HOUR);
END$$

```

```

CREATE TRIGGER add_three_hours_to_birth_date_update
BEFORE UPDATE ON users
FOR EACH ROW
BEGIN
    IF NEW.birth_date <> OLD.birth_date THEN
        SET NEW.birth_date = DATE_ADD(NEW.birth_date, INTERVAL 3 HOUR);
    END IF;
END$$
DELIMITER ;

DELIMITER //
CREATE FUNCTION change_password(user_username VARCHAR(255), old_password VARCHAR(255),
new_password VARCHAR(255))
RETURNS VARCHAR(255) DETERMINISTIC
BEGIN
    IF (SELECT user_password FROM Users WHERE username=user_username) =
SHA2(CONCAT('kimnamjoonkimseokjinminyoongijunghoseokparkjiminkimtaehyungjeonjungkookbt
s', old_password), 256) THEN
        IF new_password=old_password THEN RETURN "OK"; END IF;
        UPDATE Users SET user_password=new_password, changed_password_at=NOW() WHERE
username = user_username;
        RETURN 'OK';
    ELSE
        RETURN 'NOT OK';
    END IF;
END//
DELIMITER ;

DELIMITER //
CREATE FUNCTION check_user_login(p_username VARCHAR(255), p_password VARCHAR(255))
RETURNS INT DETERMINISTIC
BEGIN
    DECLARE count INT DEFAULT 0;

    IF (SELECT user_role FROM Users WHERE username = p_username) = 'super-admin' THEN
        SELECT COUNT(*) INTO count FROM Users WHERE username = p_username AND verified = 1
AND user_password =
SHA2(CONCAT('kimnamjoonkimseokjinminyoongijunghoseokparkjiminkimtaehyungjeonjungkookbt
s', p_password), 256);
    ELSE
        SELECT COUNT(*) INTO count FROM verifiedUsers
WHERE username = p_username AND user_password =
SHA2(CONCAT('kimnamjoonkimseokjinminyoongijunghoseokparkjiminkimtaehyungjeonjungkookbt
s', p_password), 256);
    END IF;

    RETURN count;
END//
DELIMITER ;

DELIMITER //
CREATE FUNCTION make_reservation(book_title VARCHAR(255), school INT, user INT, role
VARCHAR(255))
RETURNS VARCHAR(255) DETERMINISTIC

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```

BEGIN
    SET @book = (SELECT ID FROM Book WHERE title = book_title AND school_ID =
school);
    IF @book IS NULL THEN RETURN 'NO BOOK'; END IF;
    IF role = 'teacher' THEN SET @reservationsAllowed=1;
    ELSEIF role = 'student' THEN SET @reservationsAllowed=2;
    END IF;
    IF (SELECT COUNT(*) FROM Reservation WHERE user_ID=user AND book_ID=@book AND
(reservation_status=0 OR reservation_status=1)) <> 0 THEN
        RETURN 'ALREADY RESERVATION';
    ELSEIF (SELECT COUNT(*) FROM Lending WHERE user_ID=user AND book_ID=@book
AND was_returned_at IS NULL) <> 0 THEN
        RETURN 'ALREADY LENDING';
    ELSEIF (SELECT COUNT(*) FROM Lending WHERE user_ID=user AND was_returned_at
IS NULL AND must_be_returned_at<NOW()) <> 0 THEN
        RETURN 'DELAY';
    ELSEIF (SELECT COUNT(*) FROM Reservation WHERE user_ID=user AND
reservation_status=0) > (@reservationsAllowed-1) THEN
        RETURN 'TOO MANY';
    ELSE
        INSERT INTO Reservation (user_ID, book_ID) VALUES (user, @book);
        RETURN 'OK';
    END IF;
END//
DELIMITER ;

DELIMITER //
CREATE FUNCTION handle_reservation(book_title VARCHAR(255), school INT, u_username
VARCHAR(255))
RETURNS VARCHAR(255) DETERMINISTIC
BEGIN
    SET @book = (SELECT ID FROM Book WHERE title = book_title AND school_ID =
school);
    IF @book IS NULL THEN RETURN 'NO BOOK';
    END IF;

    SET @libraryuser = (SELECT ID FROM verifiedUsers WHERE username = u_username AND
school_ID = school AND (user_role='teacher' OR user_role='student'));
    IF @libraryuser IS NULL THEN RETURN 'NO USER';
    END IF;

    SET @userrole = (SELECT user_role FROM verifiedUsers WHERE username = u_username
AND school_ID = school);

    IF (SELECT COUNT(*) FROM Reservation WHERE user_ID=@libraryuser AND book_ID=@book
AND (reservation_status=0 OR reservation_status=1)) = 0 THEN
        SET @original = true;
    ELSE
        SET @original = false;
    END IF;

    IF @userrole = 'teacher' THEN
        SET @lendingsAllowed=1;
    ELSEIF @userrole = 'student' THEN
        SET @lendingsAllowed=2;
    END IF;

```

```

        IF (SELECT COUNT(*) FROM Lending WHERE user_ID=@libraryuser AND book_ID=@book AND
was_returned_at IS NULL) <> 0 THEN
            RETURN 'ALREADY LENDING';
        ELSEIF (SELECT COUNT(*) FROM Lending WHERE user_ID=@libraryuser AND
was_returned_at IS NULL AND must_be_returned_at<NOW()) <> 0 THEN
            RETURN 'DELAY';
        ELSEIF (SELECT copies FROM Book WHERE ID=@book) = 0 THEN
            IF @original = false THEN
                UPDATE Reservation SET pending_reservation_date=NOW(),
reservation_status=1 WHERE user_ID=@libraryuser AND book_ID=@book AND
reservation_status=0;
                RETURN 'NO COPY, UPDATED TO PENDING';
            ELSE
                RETURN 'NO COPY';
            END IF;
        ELSEIF (SELECT COUNT(*) FROM Lending WHERE user_ID=@libraryuser AND
was_returned_at IS NULL) > (@lendingsAllowed-1) THEN
            RETURN 'TOO MANY';
        ELSE
            INSERT INTO Lending (user_ID, book_ID) VALUES (@libraryuser,
@book);
            UPDATE Book SET copies=copies-1 WHERE ID=@book;
            UPDATE Reservation SET served_at=NOW(), reservation_status=2 WHERE
user_ID=@libraryuser AND book_ID=@book AND (reservation_status=0 OR
reservation_status=1);
            RETURN 'OK';
        END IF;
END//
DELIMITER ;

DELIMITER //
CREATE FUNCTION return_book(book_title VARCHAR(255), school INT, u_username
VARCHAR(255))
RETURNS VARCHAR(255) DETERMINISTIC
BEGIN
    SET @book = (SELECT ID FROM Book WHERE title = book_title AND school_ID =
school);
    IF @book IS NULL THEN RETURN 'NO BOOK';
    END IF;

    SET @libraryuser = (SELECT ID FROM verifiedUsers WHERE username = u_username AND
school_ID = school AND (user_role='teacher' OR user_role='student'));
    IF @libraryuser IS NULL THEN RETURN 'NO USER';
    END IF;

    IF (SELECT COUNT(*) FROM Lending WHERE user_ID=@libraryuser AND book_ID=@book AND
was_returned_at IS NULL) = 0 THEN
        RETURN 'NO LENDING';
    ELSE
        UPDATE Book SET copies=copies+1 WHERE ID=@book;
        UPDATE Lending SET was_returned_at=NOW() WHERE user_ID=@libraryuser AND
book_ID=@book;
        RETURN 'OK';
    END IF;
END//
DELIMITER ;

```

```

DELIMITER //
CREATE FUNCTION cancel_reservation(book_title VARCHAR(255), school INT, u_username
VARCHAR(255))
RETURNS VARCHAR(255) DETERMINISTIC
BEGIN
    SET @book = (SELECT ID FROM Book WHERE title = book_title AND school_ID =
school);
    IF @book IS NULL THEN RETURN 'NO BOOK';
    END IF;

    SET @libraryuser = (SELECT ID FROM verifiedUsers WHERE username = u_username AND
school_ID = school AND (user_role='teacher' OR user_role='student'));

    IF (SELECT COUNT(*) FROM Reservation WHERE user_ID=@libraryuser AND book_ID=@book
AND (reservation_status=0 OR reservation_status=1)) = 0 THEN
        RETURN 'NO RESERVATION';
    ELSE
        UPDATE Reservation SET canceled_at=NOW(), reservation_status=3 WHERE
user_ID=@libraryuser AND book_ID=@book;
        RETURN 'OK';
    END IF;
END//
DELIMITER ;

DELIMITER //
CREATE FUNCTION deactivate_user(school INT, u_username VARCHAR(255))
RETURNS VARCHAR(255) DETERMINISTIC
BEGIN
    SET @libraryuser = (SELECT ID FROM verifiedUsers WHERE username = u_username AND
school_ID = school AND (user_role='teacher' OR user_role='student'));
    IF @libraryuser IS NULL THEN RETURN 'NO USER';
    END IF;

    UPDATE Reservation SET canceled_at=NOW(), reservation_status=3 WHERE
user_ID=@libraryuser AND (reservation_status=0 OR reservation_status=1);
    UPDATE Book b JOIN Lending l ON l.book_ID=b.ID SET b.copies=b.copies+1,
l.was_returned_at=NOW() WHERE l.user_ID=@libraryuser AND l.was_returned_at IS NULL;
    UPDATE Review SET verified=0 WHERE user_ID=@libraryuser;
    UPDATE Users SET verified=0 WHERE ID=@libraryuser;
    RETURN 'OK';
END//
DELIMITER ;

DELIMITER //
CREATE FUNCTION verify_teacher_student(school INT, u_username VARCHAR(255))
RETURNS VARCHAR(255) DETERMINISTIC
BEGIN
    DECLARE libraryuser INT;
    DECLARE u_role VARCHAR(255);
    SELECT ID, user_role INTO @libraryuser, u_role FROM activeUsers WHERE username =
u_username AND school_ID = school AND (user_role='teacher' OR user_role='student');
    IF @libraryuser IS NULL THEN RETURN 'NO USER';
    END IF;

    UPDATE Users SET verified=1 WHERE ID=@libraryuser;
    IF u_role = 'teacher' THEN
        UPDATE Review SET verified=1 WHERE user_ID=@libraryuser;
    END IF;
END//

```

```

        END IF;
    RETURN 'OK';
END//
DELIMITER ;

DELIMITER //
CREATE FUNCTION delete_user(school INT, u_username VARCHAR(255))
RETURNS VARCHAR(255) DETERMINISTIC
BEGIN
    SET @libraryuser = (SELECT ID FROM activeUsers WHERE username = u_username AND
school_ID = school AND (user_role='teacher' OR user_role='student'));
    IF @libraryuser IS NULL THEN RETURN 'NO USER';
    END IF;

    DELETE FROM Reservation WHERE user_ID=@libraryuser;
    UPDATE Book b JOIN Lending l ON l.book_ID=b.ID SET b.copies=b.copies+1 WHERE
l.user_ID=@libraryuser AND l.was_returned_at IS NULL;
    DELETE FROM Lending WHERE user_ID=@libraryuser;
    DELETE FROM Review WHERE user_ID=@libraryuser;
    DELETE FROM Users WHERE ID=@libraryuser;
    RETURN 'OK';
END//
DELIMITER ;

DELIMITER //
CREATE FUNCTION make_review(book_title VARCHAR(255), school INT, user INT, review
VARCHAR(255), rating FLOAT)
RETURNS VARCHAR(255) DETERMINISTIC
BEGIN
    SET @book = (SELECT ID FROM Book WHERE title = book_title AND school_ID =
school);
    IF @book IS NULL THEN RETURN 'NO BOOK'; END IF;

    IF (SELECT COUNT(*) FROM Lending WHERE user_ID=user AND book_ID=@book) = 0 THEN
        RETURN 'NO LENDING';
    END IF;

    INSERT INTO Review (user_ID, book_ID, review, rating) VALUES (user, @book, review,
rating);
    RETURN 'OK';
END//
DELIMITER ;

DELIMITER //
CREATE EVENT cancel_reservations_after_one_week
ON SCHEDULE EVERY 1 DAY
DO
BEGIN
    UPDATE Reservation
    SET canceled_at = NOW(), reservation_status=3
    WHERE request_date <= DATE_SUB(NOW(), INTERVAL 1 WEEK) AND reservation_status=0
    OR pending_reservation_date <= DATE_SUB(NOW(), INTERVAL 1 WEEK) AND
reservation_status=1;
END //
DELIMITER ;

DELIMITER //

```



```

CREATE PROCEDURE get_lendings_by_school(IN year_param INT, IN month_param INT)
BEGIN
    IF year_param IS NULL AND month_param IS NULL THEN
        SELECT s.school_name, COUNT(l.book_ID) as lendings
            FROM School s
            JOIN activeUsers u ON s.ID=u.school_ID
            LEFT JOIN Lending l ON l.user_ID=u.ID
            WHERE s.school_active=1
            GROUP BY s.school_name;
    ELSEIF year_param IS NULL AND month_param IS NOT NULL THEN
        SELECT s.school_name, COUNT(CASE WHEN MONTH(l.lending_date) = month_param THEN
l.book_ID ELSE NULL END) as lendings
            FROM School s
            JOIN activeUsers u ON s.ID=u.school_ID
            LEFT JOIN Lending l ON l.user_ID=u.ID
            WHERE s.school_active=1
            GROUP BY s.school_name;
    ELSEIF year_param IS NOT NULL AND month_param IS NULL THEN
        SELECT s.school_name, COUNT(CASE WHEN YEAR(l.lending_date) = year_param THEN
l.book_ID ELSE NULL END) as lendings
            FROM School s
            JOIN activeUsers u ON s.ID=u.school_ID
            LEFT JOIN Lending l ON l.user_ID=u.ID
            WHERE s.school_active=1
            GROUP BY s.school_name;
    ELSE
        SELECT s.school_name, COUNT(CASE WHEN MONTH(l.lending_date) = month_param AND
YEAR(l.lending_date) = year_param THEN l.book_ID ELSE NULL END) as lendings
            FROM School s
            JOIN activeUsers u ON s.ID=u.school_ID
            LEFT JOIN Lending l ON l.user_ID=u.ID
            WHERE s.school_active=1
            GROUP BY s.school_name;
    END IF;
END //
DELIMITER ;

DELIMITER //
CREATE PROCEDURE get_writers_teachers_per_genre(IN genre VARCHAR(255))
BEGIN
    SELECT DISTINCT u.username AS teacher
        FROM activeUsers u
        JOIN Lending l ON u.ID=l.user_ID
        JOIN Genre g ON g.book_ID=l.book_ID
        WHERE u.user_role='teacher' AND TIMESTAMPDIFF(YEAR, NOW(), l.lending_date)<1
    AND g.genre=genre;

    SELECT DISTINCT CONCAT(w.first_name, ' ', w.last_name) AS writer
        FROM Writer w
        JOIN Writes wr ON wr.writer_ID=w.ID
        JOIN Genre g ON wr.book_ID=g.book_ID
        JOIN School s ON s.school_active=1
        JOIN Book b ON g.book_ID=b.ID AND b.school_ID=s.ID
        WHERE g.genre=genre;
END //
DELIMITER ;

```

```

DELIMITER //
CREATE PROCEDURE get_young_teachers_max_books()
BEGIN
    WITH young_teachers_books AS (
        SELECT u.username, COUNT(l.book_ID) AS books
        FROM activeUsers u
        LEFT JOIN Lending l ON u.ID=l.user_ID
        WHERE u.user_role='teacher' AND TIMESTAMPDIFF(YEAR, NOW(),
u.birth_date)<40
        GROUP BY u.username
    )
    SELECT username, books
    FROM young_teachers_books
    WHERE books = (
        SELECT MAX(books)
        FROM young_teachers_books
    );
END //
DELIMITER ;

DELIMITER //
CREATE PROCEDURE get_writers_no_lendings()
BEGIN
    WITH writer_lendings AS (
        SELECT CONCAT(w.first_name, ' ', w.last_name) AS writer,
COUNT(l.book_ID) AS lendings
        FROM Writer w
        LEFT JOIN Writes wr ON wr.writer_ID=w.ID
        LEFT JOIN Book b ON wr.book_ID=b.ID
        LEFT JOIN Lending l ON l.book_ID=b.ID
        JOIN School s ON s.school_active=1 AND b.school_ID=s.ID
        GROUP BY w.first_name, w.last_name
    )
    SELECT writer
    FROM writer_lendings
    WHERE lendings=0;
END //
DELIMITER ;

DELIMITER //
CREATE PROCEDURE get_schooladmins_same_lendings()
BEGIN
    WITH schooladmin_lendings AS (
        SELECT u.username, YEAR(l.lending_date) AS year, COUNT(l.book_ID)
AS lendings
        FROM School s
        JOIN activeUsers u ON u.school_ID=s.ID
        JOIN Book b ON b.school_ID=s.ID
        JOIN Lending l ON l.book_ID=b.ID
        WHERE u.user_role='school-admin'
        GROUP BY u.username, YEAR(l.lending_date)
    )
    SELECT GROUP_CONCAT(sc.username SEPARATOR ', ') AS schooladmins, sc.lendings
AS lendings, sc.year
    FROM schooladmin_lendings sc
    WHERE sc.lendings > 20
    GROUP BY sc.lendings, sc.year

```

```

        HAVING COUNT(*) >= 2;

END //
DELIMITER ;

DELIMITER //
CREATE PROCEDURE get_top3_genre_pairs()
BEGIN
    SELECT g1.genre AS genre1, g2.genre AS genre2, COUNT(l.book_ID) AS lendings
    FROM Genre g1
    JOIN Genre g2 ON g1.book_ID=g2.book_ID AND g1.genre<g2.genre
    LEFT JOIN Lending l ON g1.book_ID=l.book_ID
    GROUP BY g1.genre, g2.genre
    ORDER BY lendings DESC
    LIMIT 3;

END //
DELIMITER ;

DELIMITER //
CREATE PROCEDURE get_writers_5_less_than_max()
BEGIN
    WITH writer_books AS (
        SELECT CONCAT(w.first_name, ' ', w.last_name) AS writer,
COUNT(wr.book_ID) AS books
        FROM Writer w
        JOIN Writes wr ON wr.writer_ID=w.ID
        GROUP BY w.first_name, w.last_name
        ORDER BY books DESC
    ),
    max_books AS (
        SELECT books
        FROM writer_books
        LIMIT 1
    )
    SELECT w.writer, w.books
    FROM writer_books w
    JOIN max_books m
    WHERE w.books<=m.books-5;

END //
DELIMITER ;

DELIMITER //
CREATE PROCEDURE get_users_delayed_return(IN f_name VARCHAR(255), IN l_name
VARCHAR(255), IN delay_days INT, IN school_id INT)
BEGIN
    IF f_name IS NULL AND l_name IS NULL AND delay_days IS NULL THEN
        SELECT b.title, u.username, CONCAT(u.first_name, ' ', u.last_name) AS
full_name, l.must_be_returned_at
        FROM activeUsers u
        JOIN Lending l ON u.ID=l.user_ID
        JOIN Book b ON b.ID=l.book_ID
        WHERE l.must_be_returned_at<NOW() AND l.was_returned_at IS NULL AND
u.school_ID=school_id;
    ELSEIF f_name IS NOT NULL AND l_name IS NULL AND delay_days IS NULL THEN
        SELECT b.title, u.username, CONCAT(u.first_name, ' ', u.last_name) AS
full_name, l.must_be_returned_at
        FROM activeUsers u

```

```

        JOIN Lending l ON u.ID=l.user_ID
    JOIN Book b ON b.ID=l.book_ID
        WHERE l.must_be_returned_at<NOW() AND l.was_returned_at IS NULL AND
u.school_ID=school_id AND u.first_name=f_name;
    ELSEIF f_name IS NULL AND l_name IS NOT NULL AND delay_days IS NULL THEN
        SELECT b.title, u.username, CONCAT(u.first_name, ' ', u.last_name) AS
full_name, l.must_be_returned_at
        FROM activeUsers u
        JOIN Lending l ON u.ID=l.user_ID
    JOIN Book b ON b.ID=l.book_ID
        WHERE l.must_be_returned_at<NOW() AND l.was_returned_at IS NULL AND
u.school_ID=school_id AND u.last_name=l_name;
    ELSEIF f_name IS NULL AND l_name IS NULL AND delay_days IS NOT NULL THEN
        SELECT b.title, u.username, CONCAT(u.first_name, ' ', u.last_name)
AS full_name, l.must_be_returned_at
        FROM activeUsers u
        JOIN Lending l ON u.ID=l.user_ID
    JOIN Book b ON b.ID=l.book_ID
        WHERE l.must_be_returned_at<NOW() AND l.was_returned_at IS NULL AND
u.school_ID=school_id AND TIMESTAMPDIFF(day, l.must_be_returned_at, NOW())=delay_days;
    ELSEIF f_name IS NOT NULL AND l_name IS NOT NULL AND delay_days IS NULL THEN
        SELECT b.title, u.username, CONCAT(u.first_name, ' ', u.last_name)
AS full_name, l.must_be_returned_at
        FROM activeUsers u
        JOIN Lending l ON u.ID=l.user_ID
    JOIN Book b ON b.ID=l.book_ID
        WHERE l.must_be_returned_at<NOW() AND l.was_returned_at IS NULL AND
u.school_ID=school_id AND u.first_name=f_name AND u.last_name=l_name;
    ELSEIF f_name IS NOT NULL AND l_name IS NULL AND delay_days IS NOT NULL THEN
        SELECT b.title, u.username, CONCAT(u.first_name, ' ', u.last_name)
AS full_name, l.must_be_returned_at
        FROM activeUsers u
        JOIN Lending l ON u.ID=l.user_ID
    JOIN Book b ON b.ID=l.book_ID
        WHERE l.must_be_returned_at<NOW() AND l.was_returned_at IS NULL AND
u.school_ID=school_id AND u.first_name=f_name AND TIMESTAMPDIFF(day,
l.must_be_returned_at, NOW())=delay_days;
    ELSEIF f_name IS NULL AND l_name IS NOT NULL AND delay_days IS NOT NULL THEN
        SELECT b.title, u.username, CONCAT(u.first_name, ' ', u.last_name)
AS full_name, l.must_be_returned_at
        FROM activeUsers u
        JOIN Lending l ON u.ID=l.user_ID
    JOIN Book b ON b.ID=l.book_ID
        WHERE l.must_be_returned_at<NOW() AND l.was_returned_at IS NULL AND
u.school_ID=school_id AND u.last_name=l_name AND TIMESTAMPDIFF(day,
l.must_be_returned_at, NOW())=delay_days;
    ELSE
        SELECT b.title, u.username, CONCAT(u.first_name, ' ', u.last_name) AS
full_name, l.must_be_returned_at
        FROM activeUsers u
        JOIN Lending l ON u.ID=l.user_ID
    JOIN Book b ON b.ID=l.book_ID
        WHERE l.must_be_returned_at<NOW() AND l.was_returned_at IS NULL AND
u.school_ID=school_id AND u.first_name=f_name AND u.last_name=l_name AND
TIMESTAMPDIFF(day, l.must_be_returned_at, NOW())=delay_days;
    END IF;
END //

```

```

DELIMITER ;

DELIMITER //

CREATE PROCEDURE get_avg_rating_per_genre_user(IN genre VARCHAR(255), IN full_name
VARCHAR(255), IN school_id INT)
BEGIN
    IF genre IS NULL AND full_name IS NULL THEN
        SELECT g.genre, ROUND(AVG(r.rating), 2) AS avg_rating
            FROM Genre g
            JOIN Book b ON b.ID=g.book_ID
            JOIN Review r ON r.book_ID=b.ID
            JOIN activeUsers u ON u.ID=r.user_ID AND u.school_ID=school_id
        WHERE r.verified=1
            GROUP BY g.genre;

        SELECT u.username, CONCAT(u.first_name, ' ', u.last_name) AS full_name,
            ROUND(AVG(r.rating), 2) AS avg_rating
            FROM activeUsers u
            JOIN Review r ON r.user_ID=u.ID AND u.school_ID=school_id
        WHERE r.verified=1
            GROUP BY u.username, u.first_name, u.last_name;
    ELSEIF genre IS NOT NULL AND full_name IS NULL THEN
        SELECT g.genre, ROUND(AVG(r.rating), 2) AS avg_rating
            FROM Genre g
            JOIN Book b ON b.ID=g.book_ID
            JOIN Review r ON r.book_ID=b.ID
            JOIN activeUsers u ON u.ID=r.user_ID AND u.school_ID=school_id
        WHERE g.genre=genre AND r.verified=1
            GROUP BY g.genre;

        SELECT u.username, CONCAT(u.first_name, ' ', u.last_name) AS full_name,
            ROUND(AVG(r.rating), 2) AS avg_rating
            FROM Genre g
            JOIN activeUsers u ON u.school_ID=school_id
            JOIN Book b ON b.ID=g.book_ID
            JOIN Review r ON r.book_ID=b.ID AND r.user_ID=u.ID
        WHERE g.genre=genre AND r.verified=1
            GROUP BY u.username, u.first_name, u.last_name;
    ELSEIF genre IS NULL AND full_name IS NOT NULL THEN
        SELECT u.username, CONCAT(u.first_name, ' ', u.last_name) AS
full_name, g.genre, ROUND(AVG(r.rating), 2) AS avg_rating
            FROM Genre g
            JOIN activeUsers u ON u.school_ID=school_id
            JOIN Book b ON b.ID=g.book_ID
            JOIN Review r ON r.book_ID=b.ID AND r.user_ID=u.ID
        WHERE CONCAT(u.first_name, ' ', u.last_name)=full_name AND r.verified=1
            GROUP BY g.genre, u.username, u.first_name, u.last_name;

        SELECT u.username, CONCAT(u.first_name, ' ', u.last_name) AS full_name,
            ROUND(AVG(r.rating), 2) AS avg_rating
            FROM activeUsers u
            JOIN Review r ON r.user_ID=u.ID AND u.school_ID=school_id
        WHERE CONCAT(u.first_name, ' ', u.last_name)=full_name AND r.verified=1
            GROUP BY u.username, u.first_name, u.last_name;
    ELSE
        SELECT u.username, CONCAT(u.first_name, ' ', u.last_name) AS full_name,
            g.genre, ROUND(AVG(r.rating), 2) AS avg_rating

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```

        FROM Genre g
        JOIN activeUsers u ON u.school_ID=school_id
        JOIN Book b ON b.ID=g.book_ID
        JOIN Review r ON r.book_ID=b.ID AND r.user_ID=u.ID
    WHERE g.genre=genre AND CONCAT(u.first_name, ' ', u.last_name)=full_name AND
r.verified=1

        GROUP BY g.genre, u.username, u.first_name, u.last_name;

    END IF;
END //
DELIMITER ;

DELIMITER //
CREATE FUNCTION DelSchool(schoolID INT)
RETURNS VARCHAR(255) DETERMINISTIC
BEGIN
    IF (SELECT ID from School where ID = schoolID) IS NULL THEN
        RETURN "NOT OK";
    ELSE
        CREATE TEMPORARY TABLE delBooks(
            book_id INT PRIMARY KEY
        );
        CREATE TEMPORARY TABLE delWriters(
            id INT AUTO_INCREMENT PRIMARY KEY,
            writer_id INT
        );

        INSERT INTO delBooks(book_id)
        SELECT ID
        FROM Book
        WHERE school_ID = schoolID;

        INSERT INTO delWriters(writer_id)
        SELECT DISTINCT writer_ID
        FROM Writes
        WHERE book_ID IN (SELECT book_id FROM delBooks);

        DELETE FROM Reservation WHERE book_ID IN (SELECT book_id FROM
delBooks);

        DELETE FROM Lending WHERE book_ID IN (SELECT book_id FROM
delBooks);

        DELETE FROM Review WHERE book_ID IN (SELECT book_id FROM delBooks);
        DELETE FROM Genre WHERE book_ID IN (SELECT book_id FROM delBooks);
        DELETE FROM Writes WHERE book_ID IN (SELECT book_id FROM delBooks);
        DELETE FROM Writer WHERE ID IN (SELECT writer_id FROM delWriters
WHERE writer_id NOT IN (SELECT writer_ID FROM Writes));
        DELETE FROM Book WHERE school_ID=schoolID;
        DELETE FROM Users WHERE school_ID=schoolID;
        DELETE FROM School WHERE ID=schoolID;

        RETURN "OK";
    END IF;
END //
DELIMITER ;

DELIMITER //
CREATE PROCEDURE selectBooks(IN schoolID INT, IN title VARCHAR(255), IN genre
VARCHAR(255), IN writer VARCHAR(255), IN copies INT)

```

```

BEGIN

    CREATE TEMPORARY TABLE mywrites (
        book_id INT ,
        writer_id int,
        PRIMARY KEY (book_id, writer_id)
    );

    CREATE TEMPORARY TABLE Books (
        book_id INT PRIMARY KEY

    );

    IF title IS NULL AND genre IS NULL AND writer IS NULL AND copies IS NULL THEN
        INSERT INTO Books (book_id)
        SELECT b.ID
        FROM Book b
        WHERE b.school_ID = schoolID;
    ELSEIF title IS NOT NULL AND genre IS NULL AND writer IS NULL AND copies IS
NULL THEN
        INSERT INTO Books (book_id)
        SELECT b.ID
        FROM Book b
        WHERE b.school_ID = schoolID AND b.title = title;
    ELSEIF title IS NULL AND genre IS NOT NULL AND writer IS NULL AND copies IS
NULL THEN
        INSERT INTO Books (book_id)
        SELECT b.ID
        FROM Book b
        JOIN Genre g ON b.ID = g.book_ID
        WHERE b.school_ID = schoolID AND g.genre = genre;
    ELSEIF title IS NULL AND genre IS NULL AND writer IS NOT NULL AND copies IS NULL
THEN
        INSERT INTO Books (book_id)
        SELECT b.ID
        FROM Book b
        JOIN Writes wr ON b.ID = wr.book_ID
        JOIN Writer w ON w.ID = wr.writer_ID
        WHERE b.school_ID = schoolID AND CONCAT(W.first_name, ' ',
w.last_name) = writer;
    ELSEIF title IS NULL AND genre IS NULL AND writer IS NULL AND copies IS NOT NULL
THEN
        INSERT INTO Books (book_id)
        SELECT b.ID
        FROM Book b
        WHERE b.school_ID = schoolID AND b.copies = copies;
    ELSEIF title IS NOT NULL AND genre IS NOT NULL AND writer IS NULL AND copies IS
NULL THEN
        INSERT INTO Books (book_id)
        SELECT b.ID
        FROM Book b
        JOIN Genre g ON b.ID = g.book_ID
        WHERE b.school_ID = schoolID AND b.title = title AND g.genre =
genre;
    ELSEIF title IS NOT NULL AND genre IS NULL AND writer IS NOT NULL AND copies IS
NULL THEN
        INSERT INTO Books (book_id)
        SELECT b.ID
        FROM Book b
        JOIN Writes wr ON b.ID = wr.book_ID

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        JOIN Writer w ON w.ID = wr.writer_ID
            WHERE b.school_ID = schoolID AND b.title = title AND
CONCAT(W.first_name, ' ', w.last_name) = writer;
        ELSEIF title IS NOT NULL AND genre IS NULL AND writer IS NULL AND copies IS NOT
NULL THEN

            INSERT INTO Books(book_id)
            SELECT b.ID
            FROM Book b
            WHERE b.school_ID = schoolID AND b.title = title AND b.copies =
copies;
        ELSEIF title IS NULL AND genre IS NOT NULL AND writer IS NOT NULL AND copies IS
NULL THEN

            INSERT INTO Books(book_id)
            SELECT b.ID
            FROM Book b
            JOIN Writes wr ON b.ID = wr.book_ID
            JOIN Writer w ON w.ID = wr.writer_ID
            JOIN Genre g ON b.ID = g.book_ID
            WHERE b.school_ID = schoolID AND CONCAT(W.first_name, ' ',
w.last_name) = writer AND g.genre = genre;
        ELSEIF title IS NULL AND genre IS NOT NULL AND writer IS NULL AND copies IS NOT
NULL THEN

            INSERT INTO Books(book_id)
            SELECT b.ID
            FROM Book b
            JOIN Genre g ON b.ID = g.book_ID
            WHERE b.school_ID = schoolID AND b.copies = copies AND g.genre =
genre;
        ELSEIF title IS NULL AND genre IS NULL AND writer IS NOT NULL AND copies IS NOT
NULL THEN

            INSERT INTO Books(book_id)
            SELECT b.ID
            FROM Book b
            JOIN Writes wr ON b.ID = wr.book_ID
            JOIN Writer w ON w.ID = wr.writer_ID
            WHERE b.school_ID = schoolID AND b.copies = copies AND
CONCAT(W.first_name, ' ', w.last_name) = writer;
        ELSEIF title IS NOT NULL AND genre IS NOT NULL AND writer IS NOT NULL AND copies
IS NULL THEN

            INSERT INTO Books(book_id)
            SELECT b.ID
            FROM Book b
            JOIN Writes wr ON b.ID = wr.book_ID
            JOIN Writer w ON w.ID = wr.writer_ID
            JOIN Genre g ON b.ID = g.book_ID
            WHERE b.school_ID = schoolID AND CONCAT(W.first_name, ' ',
w.last_name) = writer AND g.genre = genre AND b.title = title;
        ELSEIF title IS NOT NULL AND genre IS NOT NULL AND writer IS NULL AND copies IS
NOT NULL THEN

            INSERT INTO Books(book_id)
            SELECT b.ID
            FROM Book b
            JOIN Genre g ON b.ID = g.book_ID
            WHERE b.school_ID = schoolID AND b.title = title AND b.copies =
copies AND g.genre = genre;
        ELSEIF title IS NOT NULL AND genre IS NULL AND writer IS NOT NULL AND copies IS
NOT NULL THEN

```



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        INSERT INTO Books(book_id)
        SELECT b.ID
        FROM Book b
    JOIN Writes wr ON b.ID = wr.book_ID
    JOIN Writer w ON w.ID = wr.writer_ID
        WHERE b.school_ID = schoolID AND b.title = title AND b.copies =
copies AND CONCAT(W.first_name, ' ', w.last_name) = writer;
    ELSEIF title IS NULL AND genre IS NOT NULL AND writer IS NOT NULL AND copies IS
NOT NULL THEN
        INSERT INTO Books(book_id)
        SELECT b.ID
        FROM Book b
    JOIN Writes wr ON b.ID = wr.book_ID
    JOIN Writer w ON w.ID = wr.writer_ID
    JOIN Genre g ON b.ID = g.book_ID
        WHERE b.school_ID = schoolID AND CONCAT(W.first_name, ' ',
w.last_name) = writer AND g.genre = genre AND b.copies = copies;
    ELSE
        INSERT INTO Books(book_id)
        SELECT b.ID
        FROM Book b
    JOIN Writes wr ON b.ID = wr.book_ID
    JOIN Writer w ON w.ID = wr.writer_ID
    JOIN Genre g ON b.ID = g.book_ID
        WHERE b.school_ID = schoolID AND CONCAT(W.first_name, ' ',
w.last_name) = writer AND g.genre = genre AND b.title = title AND b.copies = copies;
    END IF;

    INSERT INTO mywrites(book_id, writer_id)
    SELECT book_ID, writer_ID
    FROM Writes
    WHERE book_ID IN (SELECT book_id FROM Books);

    SELECT b.ID, b.title, b.publisher, b.ISBN, b.page_number, b.summary,
b.copies, b.image, b.lang, b.keywords, gen.genres, final.full_names
    FROM Book b
    JOIN (SELECT g.book_ID, GROUP_CONCAT(g.genre SEPARATOR ", ") AS genres
        FROM Genre g
        WHERE g.book_ID IN (SELECT book_id FROM Books) GROUP BY g.book_ID)
AS gen
    ON b.ID = gen.book_ID
    JOIN (SELECT sm.book_id, GROUP_CONCAT(full_name SEPARATOR ", ") AS
full_names
        FROM (SELECT book_id, CONCAT(first_name, " ", last_name) AS
full_name
            FROM (SELECT m.book_id, w.first_name, w.last_name
                FROM mywrites m
                JOIN writer w ON m.writer_id = w.ID) AS books_writers) AS
sm GROUP BY book_id) AS final
    ON final.book_id = b.ID;

END //
DELIMITER ;

DELIMITER //
CREATE PROCEDURE selectLendedBooks(IN userID INT)
BEGIN

```

```

CREATE TEMPORARY TABLE mywrites(
    book_id INT ,
    writer_id int,
    PRIMARY KEY(book_id, writer_id)
);
CREATE TEMPORARY TABLE Books(
    book_id INT PRIMARY KEY
);

INSERT INTO Books(book_id)
SELECT b.ID
FROM Book b
JOIN Lending l ON b.ID = l.book_ID
WHERE l.user_ID = userID;

INSERT INTO mywrites(book_id, writer_id)
SELECT book_ID, writer_ID
FROM Writes
WHERE book_ID IN (SELECT book_id FROM Books);

SELECT b.ID, b.title, b.publisher, b.ISBN, b.page_number, b.summary,
b.copies, b.image, b.lang, b.keywords, gen.genres, final.full_names,
l.was_returned_at, l.must_be_returned_at, l.lending_date
FROM Book b
JOIN Lending l ON l.book_ID = b.ID
JOIN (SELECT g.book_ID, GROUP_CONCAT(g.genre SEPARATOR ", ") AS genres
FROM Genre g
WHERE g.book_ID IN (SELECT book_id FROM Books) GROUP BY g.book_ID)
AS gen
ON b.ID = gen.book_ID
JOIN (SELECT sm.book_id, GROUP_CONCAT(full_name SEPARATOR ", ") AS
full_names
FROM (SELECT book_id, CONCAT(first_name, " ", last_name) AS
full_name
FROM (SELECT m.book_id, w.first_name, w.last_name
FROM mywrites m
JOIN writer w ON m.writer_id = w.ID) AS books_writers) AS
sm GROUP BY book_id) AS final
ON final.book_id = b.ID;

END //
DELIMITER ;

DELIMITER //
CREATE PROCEDURE extract_names_genre(IN name_string VARCHAR(255), IN genre_string
VARCHAR(255), IN book_id INT)
BEGIN
    DECLARE str1 VARCHAR(255);
    DECLARE sub_str1 VARCHAR(255);
    DECLARE str2 VARCHAR(255);
    DECLARE sub_str2 VARCHAR(255);
    DECLARE f_name VARCHAR(255);
    DECLARE l_name VARCHAR(255);
    DECLARE writer_id INT;

    SET str1 = name_string;
    SET str2 = genre_string;

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        WHILE (SELECT LENGTH(str1)) > 0 DO
            SET sub_str1 = (SELECT SUBSTRING_INDEX(str1, ",", 1));
            SET f_name = (SELECT SUBSTRING_INDEX(sub_str1, " ", 1));
            SET l_name = (SELECT SUBSTRING_INDEX(sub_str1, " ", -1));
            SET writer_id = (SELECT ID FROM writer WHERE first_name = f_name
AND last_name = l_name);
            IF (writer_id) IS NULL THEN
                INSERT INTO writer (first_name, last_name) VALUES
(f_name, l_name);
                SET writer_id = (SELECT ID FROM writer WHERE ID =
LAST_INSERT_ID());
            END IF;
            INSERT INTO writes (writer_ID, book_ID) VALUES (writer_id,
book_id);
            SET str1 = (SELECT REPLACE(str1, (SELECT CONCAT("", sub_str1,
", ")), ""));
        END WHILE;

        WHILE (SELECT LENGTH(str2)) > 0 DO
            SET sub_str2 = (SELECT SUBSTRING_INDEX(str2, ",", 1));
            INSERT INTO genre(book_ID, genre) VALUES (book_id, sub_str2);
            SET str2 = (SELECT REPLACE(str2, (SELECT CONCAT("", sub_str2,
", ")), ""));
        END WHILE;
    END //
DELIMITER ;

DELIMITER //
CREATE FUNCTION UpdateBook(bookID INT, schoolID INT, publisher_ VARCHAR(255), ISBN_
VARCHAR(255), page_number_ INT, summary_ VARCHAR(255), copies_ INT, image_
VARCHAR(255), lang_ VARCHAR(255), keywords_ VARCHAR(255))
RETURNS VARCHAR(255) DETERMINISTIC
BEGIN
    DECLARE schID INT;
    SELECT school_ID INTO schID FROM Book WHERE ID = bookID AND school_ID =
schoolID;
    IF schID IS NULL THEN RETURN "NO BOOK";
    ELSE
        CREATE TEMPORARY TABLE delWriters(
            writerid INT PRIMARY KEY
        );
        INSERT INTO delWriters(writerid)
        SELECT DISTINCT writer_ID
        FROM writes
        WHERE book_ID = bookID;

        UPDATE Book
        SET publisher = publisher_, ISBN = ISBN_, page_number =
page_number_, summary = summary_, copies = copies_, image = image_, lang = lang_,
keywords = keywords_
        WHERE ID = bookID;

        DELETE FROM writes WHERE book_ID = bookID;
        DELETE FROM writer WHERE ID IN (SELECT writerid FROM delWriters
WHERE writerid NOT IN (SELECT writer_ID FROM writes ));
        DELETE FROM genre WHERE book_ID = bookID;
    
```

```

        RETURN "OK";
    END IF;
END //
DELIMITER ;

DELIMITER //
CREATE FUNCTION DelBook(bookID INT, userSchID INT)
RETURNS VARCHAR(255) DETERMINISTIC
BEGIN
    DECLARE schID INT;
    SELECT school_ID INTO schID FROM book WHERE ID = bookID AND school_ID =
userSchID;
    IF schID IS NULL THEN RETURN "NO BOOK";
    ELSE
        CREATE TEMPORARY TABLE delWriters(
            writerid INT PRIMARY KEY
        );
        INSERT INTO delWriters(writerid)
        SELECT DISTINCT writer_ID
        FROM writes
        WHERE book_ID = bookID;

        DELETE FROM writes WHERE book_ID = bookID;
        DELETE FROM writer WHERE ID IN (SELECT writerid FROM delWriters
WHERE writerid NOT IN (SELECT writer_ID FROM writes ));
        DELETE FROM reservation WHERE book_ID = bookID;
        DELETE FROM lending WHERE book_ID = bookID;
        DELETE FROM review WHERE book_ID = bookID;
        DELETE FROM genre WHERE book_ID = bookID;
        DELETE FROM book WHERE ID = bookID;
        RETURN "OK";
    END IF;
END //
DELIMITER ;

```

DML

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INSERT INTO School (school_name, address, city, phone, email, principal) VALUES
('Schmidt PLC', '63838 White Mountain Suite 614
Port Michael, MA 68135', 'Port Laura', '158-563-3037', 'graymichael@example.org',
'Elizabeth Ortega');
INSERT INTO School (school_name, address, city, phone, email, principal) VALUES
('Rubio-Mitchell', '93588 Joseph View Suite 450
Lake Joshua, MD 74998', 'Dorothyview', '(297)109-3272', 'michael13@example.com',
'Linda Martin');
INSERT INTO School (school_name, address, city, phone, email, principal) VALUES
('James LLC', '334 Aaron Vista
Lake Shirley, CA 85095', 'Tylerton', '001-381-619-1864x819', 'melissa13@example.org',
'Meredith Gomez');

INSERT INTO Book (title, publisher, ISBN, page_number, summary, copies, image, lang,
keywords, school_ID) VALUES

```

('Early pressure air.', 'Holmes, Gay and Baxter', '978-1-56847-352-9', 219, 'Night tree yes establish recent allow rock describe. Hotel take someone lose. Financial decade notice address not this. Thousand everybody new six unit detail name.', 6, 'https://picsum.photos/143/469', 'iu', 'foreign, character, face, magazine, foreign', 3),
('Hold window toward.', 'Hernandez-Goodwin', '978-0-903283-48-9', 250, 'Pass them long. Probably issue check far candidate.
Note similar property kind cultural.
Cup actually TV need impact win. Sure answer mother apply.
Protect detail black whether be summer imagine.', 0, 'https://picsum.photos/389/658', 'pl', 'ok, head, wide, might, per', 2),
('Four media treatment.', 'Bailey, Martin and Adkins', '978-1-4950-5361-0', 945, 'Community of measure join. Prepare campaign environmental American information until. Gun teacher there bed growth.
Customer author only country money so those citizen. Although police experience book them cell choice. View least such imagine.', 6, 'https://placekitten.com/538/806', 'sc', 'voice, sure, morning, left, by', 3),
('Truth play customer let window.', 'Morales LLC', '978-1-59312-684-1', 468, 'Body since person mind attack former whom. Doctor matter push fast at evidence them. Show well physical may tonight.
Just meet two member piece after. Letter always resource save board treat fear less.', 4, 'https://placekitten.com/807/517', 'eu', 'attack, decision, least, black, beautiful', 2),
('Identify quickly law.', 'Santos Inc', '978-0-07-667932-4', 572, 'Under between toward entire water boy. Forward often radio fish.
Know something data cover deal heart media song.
Song couple main clear benefit avoid. Spend consumer these decision any Mr have.', 8, 'https://placekitten.com/971/982', 'he', 'less, staff, personal, before, general', 2),
('Around team reveal.', 'Bryant-Olson', '978-0-8000-8121-8', 377, 'Cell customer affect set stock study. Green century another son.
Doctor personal here unit state. Foot too sea.
Subject his thank food traditional beautiful. Stay view song yourself. Approach health beyond staff executive.', 5, 'https://picsum.photos/59/352', 'lzh', 'between, responsibility, eat, admit, choose', 3),
('Assume adult similar.', 'Farrell-Richardson', '978-0-05-965538-3', 950, 'Expect send agency official so change discuss. Beautiful serious off blue. Bring year rule middle daughter serve capital.
Community according time anything mother. Table kind support think.', 9, 'https://dummyimage.com/960x262', 'nso', 'speak, nice, who, audience, produce', 1),
('Off cultural site.', 'Murphy and Sons', '978-0-512-54728-6', 836, 'If page option white get choose. Feeling great social always put. So country food around call apply.
Result represent worry production end successful including. Center to the when. Career staff floor within personal he.', 3, 'https://picsum.photos/53/944', 'wa', 'top, billion, star, answer, south', 3),
('Sea according.', 'Pitts, Gray and Little', '978-1-4322-3187-3', 212, 'Street within stock avoid rate. Might very interest perhaps agree rich mention.
Entire member word understand billion carry. Century heart already player. Lawyer serious management experience region radio wife.', 3, 'https://placekitten.com/451/629', 'hr', 'section, part, clear, beautiful, drug', 2),
('Want near.', 'Kim, Austin and Vasquez', '978-0-9919419-9-5', 816, 'Improve man keep bit. Help ask direction interesting. Soon important world board begin product mission. Present analysis service expert least stuff boy sure. A minute store end high interest eat who.', 8, 'https://placekitten.com/479/358', 'dz', 'line, several, risk, wife, certainly', 1),

('Investment suffer first happy.', 'Mitchell-Thompson', '978-1-4062-8735-6', 242, 'Appear single two discuss. Station around create type specific author six watch. Food kitchen attorney world can week. Put save development responsibility interview. A all rise example away deal.', 5, 'https://picsum.photos/100/7', 'gu', 'probably, here, range, consumer, relationship', 1), ('Surface drop century.', 'Martinez, Hurst and Montgomery', '978-1-4654-8932-6', 829, 'Candidate hope just full food issue wall. Eat yeah read arrive cold trouble nation. Reduce chair use. Senior account play account him find. Bar hour maybe happy whether ahead. Show happy laugh occur high.', 9, 'https://placekitten.com/407/636', 'wae', 'take, performance, before, consider, minute', 1), ('What environment.', 'Sharp LLC', '978-0-274-02920-4', 388, 'Least market once. Year human according baby reflect data audience by. Develop news mother their surface account decide toward. Section southern young occur financial few social up. Turn sound who hair again. Administration response someone debate.', 9, 'https://picsum.photos/107/628', 'th', 'feel, child, relate, with, front', 1), ('Again step town.', 'Michael and Sons', '978-1-84345-801-2', 286, 'Line difficult really son serve. Simple despite cup staff wrong speak. Television true recognize today. Themselves sort hundred simply. Development church hour social recently picture.', 8, 'https://placekitten.com/1023/277', 'gez', 'me, role, me, whole, simple', 2), ('Develop well.', 'Zuniga and Sons', '978-0-7201-0564-3', 360, 'Job surface area. Community kitchen miss particular finish control result. Capital whatever despite understand produce two case available. Help red conference space statement. Ago nothing those prevent. Him much especially tell top up.', 0, 'https://picsum.photos/1003/565', 'mi', 'child, and, security, already, just', 3), ('Recently free scene.', 'Williams-Richardson', '978-1-56965-630-3', 596, 'Board away type worry himself head door. Some significant sing operation company. You which capital spend hour. Yes food care. Respond well air. You military why worry page might.', 8, 'https://dummyimage.com/273x637', 'kn', 'hospital, air, maintain, wait, street', 3), ('South rule four heavy continue.', 'Myers-Hogan', '978-1-02-981361-1', 155, 'Smile money five manage. Alone turn likely challenge western few store. Dog somebody necessary people. Thing tonight relate wind shoulder practice. Leave treat yeah treatment cut street half. Break that already. Mention available rock guy why.', 9, 'https://picsum.photos/304/955', 'nl', 'surface, follow, before, your, director', 2), ('Over discuss design ball individual.', 'King PLC', '978-0-02-988596-3', 990, 'Treat dinner economic six father town. Thank item suddenly know record PM. Majority letter quite lot us. As occur certainly former. Indeed despite laugh leg.', 0, 'https://dummyimage.com/343x52', 'tk', 'walk, treat, arrive, down, specific', 2), ('Learn never issue child.', 'Acosta-Ellis', '978-0-8356-5348-0', 120, 'Baby admit seven off economy fast. I land end once. Operation agent some it couple. Usually determine energy share. Cell region reason detail tree it method. Against cell career wind talk choose ability. Both become car likely whole fund himself near.', 3, 'https://placekitten.com/758/242', 'am', 'everything, drug, actually, street, allow', 2), ('Why lot science central.', 'Tucker PLC', '978-1-175-58340-6', 420, 'Nature here commercial sit. Follow better heavy chair education. Century customer gun control party mouth. Each offer sing according particularly character four. Effort half education offer century.', 0, 'https://dummyimage.com/623x195', 'th', 'pretty, east, artist, same, put', 2),

('Management employee environmental himself.', 'Roman, Cannon and Leonard', '978-0-16-486680-3', 705, 'Maintain share power kid water order when. Decade work drive technology operation over generation.
Early goal prevent hit ever. Action address for value area gas once. Country wall fall three later hour. Allow loss into support arm.', 6, 'https://dummyimage.com/748x539', 'tt', 'program, buy, shake, cover, build', 3),
('Offer money candidate pattern.', 'Smith, Hurst and Smith', '978-1-69783-066-8', 341, 'She deep president where many. Resource center east room work toward.
Me physical around however wait themselves must. Early eat south water. Gas end agency understand east yeah. Seek certainly again drop record.', 5, 'https://placekitten.com/419/435', 'mk', 'human, side, find, investment, raise', 1),
('Use security mission interview.', 'Ramos PLC', '978-0-513-67796-8', 83, 'Threat everybody I protect relationship. Subject stage institution real bag. Bill wear born subject never beyond.
Meeting teacher politics method hold any ground two. Factor everyone threat here test husband. Time position show mention ball.', 7, 'https://picsum.photos/329/1012', 'zu', 'field, in, break, campaign, treatment', 2),
('No record great special bit.', 'Williams-Ramirez', '978-0-85798-995-6', 60, 'White dinner either radio station treatment. Stage yeah treat art yes. Her pretty remember. Three while full. Traditional blood recent risk manager.
Make increase professor perhaps behind training. Space Republican bad rest control indeed speech.', 1, 'https://picsum.photos/11/852', 'ga', 'set, office, ready, TV, different', 2),
('Shoulder small rest.', 'James-Gordon', '978-1-941017-23-4', 58, 'Significant quickly any purpose person experience. Receive have glass politics former fine military.
Certainly matter level left. Scientist team audience score. Work world at produce. Data guy statement policy recently protect.', 0, 'https://picsum.photos/464/428', 'ja', 'behind, use, recent, message, cost', 3),
('Fill receive all article.', 'Griffith-Baker', '978-1-86036-108-1', 660, 'Author low begin nor everyone admit. Industry explain glass the use amount. Whatever north my use.
Account lead describe young whom majority. Finish never just where responsibility each. Standard value entire song notice.', 10, 'https://picsum.photos/352/36', 'lv', 'consider, option, three, degree, him', 3),
('Who about.', 'Doyle-Zamora', '978-0-604-01151-0', 860, 'Cut scene defense table second increase floor. Half significant can deal.
Water training pattern southern. Make shake exactly.
Beautiful next significant. Whole really begin do. Happy fly star.', 3, 'https://dummyimage.com/1011x884', 'ig', 'structure, they, hour, raise, cut', 3),
('Central dog.', 'Garza-Campbell', '978-0-87205-692-3', 245, 'Between sister according onto. Discussion pay church thing. Measure lose economic buy realize.
Herself wide nature need plant face participant. Child usually interview professional. Easy cup social method production.', 0, 'https://dummyimage.com/257x386', 'yi', 'hold, knowledge, important, suggest, decision', 2),
('Forget election.', 'Garcia LLC', '978-0-9517787-4-6', 863, 'You small approach field drive according. Federal assume series sing place citizen.
Picture plant only service involve condition. Able shake approach. Anyone that stay card three than action.
Ago food involve how high. Recognize power four chair.', 5, 'https://picsum.photos/801/807', 'an', 'approach, art, wrong, success, like', 1),
('Answer else be sport open.', 'Petty, Lewis and Hernandez', '978-1-70488-989-4', 844, 'Artist part worker first fly plan religious. Cost table interesting.
Require between bag nothing appear. Kitchen image reality window. Administration lead safe toward a.', 0, 'https://dummyimage.com/322x651', 'ja', 'move, carry, institution, everybody, cell', 2),

('Message owner old guy behavior.', 'Perez, Armstrong and Jones', '978-0-250-36302-5', 935, 'Risk source true our particular exactly. Write these process mind lawyer relate. Item recognize resource defense statement.
Dinner election dinner fish our weight citizen them. Wonder off charge movie right environmental.', 4, 'https://picsum.photos/605/178', 'zu', 'benefit, program, thank, heavy, do', 2),
('Gas enough board.', 'Snyder Group', '978-1-348-48039-6', 846, 'True generation election news mouth. Hospital by western serious charge.
Give staff can avoid forget always right main. Another few close history scene but talk.', 4, 'https://picsum.photos/123/466', 'uk', 'tend, responsibility, local, her, build', 3),
('Too south rather.', 'Vincent, Stafford and Anderson', '978-0-17-956272-1', 509, 'Manage enough reach success. Fall sea live yeah travel apply budget bank.
Girl free risk professional try imagine trip. Song because left. Kind young sometimes home so. Successful tend same energy player.', 10, 'https://dummyimage.com/181x782', 'tig', 'accept, space, hope, area, buy', 2),
('Direction local.', 'Miller-Hardin', '978-0-05-115476-1', 713, 'Turn face reach letter Mrs see shake. Wear establish majority president born natural yourself detail. Majority behavior form quickly fact run could range.
Such become position. Sure because skin with.', 9, 'https://dummyimage.com/658x158', 'iw', 'born, health, our, item, answer', 1),
('Such note early.', 'Coleman-Smith', '978-1-221-61890-8', 624, 'Middle by party probably good stay nearly. Send citizen how increase.
Its everybody although professional garden. Movie treatment heart war.
Fine bank race power. Support difference them until.', 8, 'https://placekitten.com/758/3', 'en', 'less, bit, answer, trial, rise', 2),
('Including line machine yes.', 'Malone-Jones', '978-1-134-06541-7', 811, 'Business make environmental step late nothing ability fund. Network example song this write. One lay perhaps quickly maintain. Man within use affect.
Too after prepare three lead. Cultural million through happen relationship.', 6, 'https://picsum.photos/104/425', 'lt', 'tax, then, gas, clearly, event', 3),
('Paper collection.', 'Johnson Ltd', '978-0-530-87317-6', 925, 'Network executive better ball power. Small discover specific do quality. Bank almost nor.
Cup ready pull seat. Product air conference successful international. Tonight pass bag pass book week relate.', 1, 'https://placekitten.com/1003/906', 'dv', 'respond, open, none, modern, mind', 2),
('Baby hit drop.', 'Medina-Dalton', '978-1-84731-099-6', 103, 'Chance become away idea tend establish. Such others yes me. List I take artist.
Grow most difference once suffer. American just oil as.
Quite race news agreement. Likely yes international however couple glass state. Skin door morning open try.', 2, 'https://placekitten.com/827/586', 'tl', 'according, talk, coach, cut, if', 3),
('Unit life chance total.', 'Sawyer Ltd', '978-0-7716-5238-7', 418, 'Sit form manage. Break believe analysis present actually prove. Too interest pressure sure city stop create.
Example sit them among truth station. Television add short interesting available return loss. Moment become election word policy.', 4, 'https://placekitten.com/451/59', 'el', 'kitchen, great, capital, even, dream', 1),
('Help science against seven.', 'Travis-Garza', '978-1-5190-9739-2', 66, 'Parent threat democratic Mr ago focus. Alone very office gas.
Day section reduce benefit book however ask. Grow finally Republican surface far meet.', 5, 'https://dummyimage.com/51x758', 'se', 'police, develop, build, step, matter', 1),
('Black husband.', 'Phillips-King', '978-1-192-59847-6', 93, 'Bit many arm throughout conference. Recent political teach media someone threat right.
Mean leave mission item. Fill street sport exist green.

Economy end friend within. Clear degree able blood responsibility meet. Clear weight fill a someone.', 5, 'https://dummyimage.com/788x367', 'ss', 'miss, dream, of, white, which', 1),

('Material soon wall member.', 'Oliver-Lopez', '978-0-578-21948-6', 184, 'Into do age no. Floor day middle management draw. Begin yet top effect. Today above but effort officer whose.

Force move charge way determine Mr old.

Writer something factor amount decade. Animal player claim yourself.', 9, 'https://picsum.photos/1008/930', 'tl', 'response, song, well, behind, job', 2),

('During indeed point pretty.', 'Simmons Ltd', '978-0-07-323587-5', 795, 'Building argue who. When floor level blue. Fill gas fine less often.

Short environment treat tree. Model various land beautiful world four billion. Future culture all.', 2, 'https://placekitten.com/930/645', 'lij', 'return, clearly, eat, young, song', 3),

('Method bill group member course.', 'Stewart, Young and Carroll', '978-1-4643-3124-4', 608, 'Price perform want design very subject. Source others good including involve wish teacher. Together evidence herself that man guy.

Mission develop significant in. Option always thousand check.', 7, 'https://placekitten.com/258/621', 'tcy', 'be, middle, heart, feel, feeling', 1),

('Nothing question cost along country.', 'Green-Wright', '978-0-89327-416-0', 569, 'Gas society specific beyond we hold no. Occur simply box structure space camera.

Little explain trade operation hospital.

Others chance goal believe and population.', 0, 'https://picsum.photos/679/525', 'sid', 'mouth, put, meeting, staff, perform', 1),

('Since majority major.', 'Lee LLC', '978-0-7222-9038-5', 896, 'Side any report painting already have first. Charge sing program research money area set. Marriage born new pay health use. Top choose employee executive.', 10, 'https://placekitten.com/400/537', 'pa', 'that, sing, member, within, attack', 1),

('Cup staff today.', 'Walls-Callahan', '978-0-909290-67-2', 80, 'Medical third watch still where. Culture middle particular impact plan soldier with training. Those computer speak home.

Building less these despite ten. International maybe practice outside school. Term baby rule subject available compare.', 8, 'https://picsum.photos/919/272', 'mhr', 'leave, since, life, live, break', 1),

('Describe own possible office.', 'Hughes, Johnson and Cooper', '978-0-905791-17-3', 296, 'Spring else attention receive ball. Laugh why describe meeting. Any might doctor.

Especially would run radio try close. Beat party evening tell technology long sister. Make fast strategy adult put investment second model.', 0, 'https://picsum.photos/920/77', 'pa', 'street, condition, along, young, in', 3),

('Receive and center.', 'Brown-Savage', '978-1-114-22315-8', 421, 'Military strategy charge worker under blue. Standard newspaper wonder Mrs once. Factor course professor population represent assume affect.', 6, 'https://dummyimage.com/964x363', 'nso', 'room, though, smile, official, inside', 2),

('Computer morning police.', 'White, McGee and Carson', '978-1-218-99383-4', 525, 'Daughter official cut wall.

Now go them argue. Face need so lay. Section avoid interest.

Approach go challenge if fund also. Minute quickly team phone we.

Could less lawyer add. Key future check watch various job.', 0, 'https://dummyimage.com/370x824', 'tn', 'professional, north, gun, claim, cell', 1),

('Leave friend compare.', 'Parker Group', '978-0-09-471796-1', 964, 'Spend sort actually say on one heavy. Republican difference character mission many of. Stuff general than tell still play.

Election after reveal anyone. Find protect couple election choice these fine. Enjoy will idea source everybody piece my.', 8, 'https://placekitten.com/652/782', 'mt', 'main, result, treat, become, foot', 2),

('All final become involve.', 'Rodriguez, Ayala and McCall', '978-1-72211-885-3', 937,
 'Fly church without way space who chair. What blood sign out line produce admit
 professional.
 Present significant environmental rock. Two clear way own. Yet sometimes without site
 onto.', 7, 'https://dummyimage.com/89x1007', 'lv', 'trade, hundred, possible, film,
 stop', 3),
 ('Worry energy four participant evening.', 'Cox, Delgado and Smith', '978-1-56759-500-
 0', 659, 'Weight media what anyone poor could. That single speech begin
 significant. Spend his and over manage white measure.
 Structure need personal. Nation seek good talk. Produce morning wide me successful
 reveal night.', 7, 'https://picsum.photos/294/130', 'shs', 'pull, measure,
 professor, dinner, benefit', 3),
 ('Property generation crime send.', 'Christian Ltd', '978-0-01-462956-5', 487, 'Live
 executive project Democrat item. Power issue treatment water real west. Song spend
 begin fly offer.
 Bed enter sport star.
 Allow specific sense ball. Occur establish size work cause. Interest program security
 what north draw.', 4, 'https://dummyimage.com/74x624', 'shs', 'east, around, west,
 foot, information', 2),
 ('Consider hard against as.', 'Juarez-White', '978-1-4272-6538-8', 126, 'Result tell
 be both. Turn might argue not word property news structure.
 Talk stuff much traditional detail eight standard become. Activity his oil magazine
 manage.', 9, 'https://placekitten.com/904/546', 'eu', 'rest, Mrs, hotel, successful,
 drop', 3),
 ('Measure data hundred office happen.', 'Owen-Robinson', '978-1-366-81920-8', 327,
 'Sing their tonight event. Him add along be along floor. Class wind past set write
 while.
 Economic have near available surface without ask. Rather beat mouth answer music
 likely create eat.', 2, 'https://placekitten.com/252/869', 'tn', 'go, then,
 participant, wrong, easy', 2),
 ('Discover computer feel.', 'Sanchez, Jordan and Santos', '978-1-327-91495-9', 490,
 'Anything they until live share effort eat. Onto growth center present discover real.
 Apply teacher memory most present address single.
 Person ahead accept. Brother class old either agree thousand. Common consider explain
 finish.', 6, 'https://dummyimage.com/289x504', 'en', 'Congress, table, state, take,
 indicate', 1),
 ('Grow store hard yes vote.', 'Serrano-Branch', '978-0-11-208164-7', 445, 'Others
 recent situation forget. Manage recently range agent here.
 Physical debate kind moment name just president. None quickly follow why. While
 responsibility behavior determine them make.', 5, 'https://placekitten.com/714/225',
 'sv', 'create, bed, voice, away, happen', 2),
 ('Themselves make relationship.', 'Boyd-Cervantes', '978-1-5382-7623-5', 308, 'Buy
 politics medical financial. Alone question phone they senior ever. Far movement
 themselves choice significant five.
 Rise as she. Thousand but me huge coach then animal office.', 5,
 'https://placekitten.com/675/454', 'mg', 'and, reality, quickly, best, consider', 2),
 ('Feeling three hot firm.', 'Brown, George and Thomas', '978-0-301-82003-3', 635,
 'Yourself property international foot step. Could director garden that. Throughout
 blood interesting against.
 Mission big nor about.
 Team news world general evidence. Almost remain work officer since ever room
 protect.', 6, 'https://dummyimage.com/455x695', 'ky', 'I, fish, country, voice, pass',
 3),
 ('Win as.', 'Smith PLC', '978-1-197-22175-1', 1000, 'East dark decision. Part artist
 may type. Cup technology certain buy run personal choice career.
 Plan value guy point. Almost event speak perhaps catch somebody turn. Surface party
 five cold finish.', 6, 'https://placekitten.com/464/72', 'nso', 'meeting,

run, floor, the, woman', 3),
('Bed country eat receive.', 'Taylor-Lindsey', '978-1-9730-0525-4', 683, 'Various now
employee exactly people join. Me view whatever hand positive point main
effort. Participant stop of item.
Service common church against agent total. None administration later series candidate
floor.', 5, 'https://placekitten.com/196/510', 'lij', 'wonder, light, capital,
cultural, how', 2),
('Develop high born.', 'Brooks-Brown', '978-0-86273-969-0', 83, 'Short system thing
plant mean poor. Past investment loss hour view build occur.
Shake along strong agree yard. How song information here season.
Stay table each rate reason.', 2, 'https://dummyimage.com/733x243', 'ru', 'good,
small, police, firm, movie', 2),
('Fall all reveal girl.', 'Mason PLC', '978-1-86819-331-8', 907, 'Own common level
only leave must who result. Report miss member give relate early.
Image responsibility onto article page. Describe maintain we himself successful. Their
drug well drug local son. Management consumer law.', 1,
'https://picsum.photos/388/351', 'fa', 'president, source, war, what, move', 1),
('Safe letter particularly expert.', 'Barnes, Martin and Reilly', '978-0-581-81565-1',
505, 'Artist thought take sell stop ready. Attorney lead fear part something. Civil
third white medical. Reduce hour simple move institution.', 3,
'https://picsum.photos/220/750', 'se', 'chair, leader, example, ago, green', 2),
('Support sit evidence.', 'Dodson Group', '978-1-79825-909-2', 497, 'Performance week
send than maybe he admit end. Pm million despite voice. Relate actually
contain sport.
Catch current Mrs herself hold interview marriage. Western cost similar what weight.
Late agent industry outside actually.', 9, 'https://placekitten.com/230/838', 'mt',
'concern, hold, network, recognize, budget', 3),
('Cup subject result be.', 'Delgado, Petersen and Stein', '978-1-78883-609-8', 927,
'Statement certainly join store. Tree type buy shake employee who. Very beat remain
participant she however.
Federal hand price during all walk. Eight reflect reflect although space. Lawyer
themselves lay allow success.', 7, 'https://placekitten.com/893/969', 'ru', 'next,
see, determine, who, similar', 1),
('Population music even end.', 'Guerra, Soto and Barnett', '978-1-08-119234-1', 827,
'Store song those college level reason. Strategy lead light leave instead less doctor.
Show week professional door degree. Tree it there street let follow. Institution
himself share police.', 9, 'https://picsum.photos/530/459', 'hr', 'down, along,
knowledge, magazine, area', 3),
('Represent federal structure.', 'Henderson, Mcgee and Contreras', '978-0-219-43267-
0', 930, 'Do sell network usually first practice later. Major image scientist save
near rich claim. Building hospital pretty still though game far. Prove attorney
provide cost interesting third.', 7, 'https://dummyimage.com/350x102', 'lb', 'admit,
if, teach, participant, meeting', 1),
('Power tonight.', 'Garcia-Walker', '978-1-79951-795-5', 726, 'Suffer them have
employee much size drop. Still court east have. Face might worry of forget.
Rather reveal have evening until treat.
Sell agent camera nice start training. Away nor inside admit guy. Remain involve wrong
especially.', 10, 'https://placekitten.com/643/650', 'mni', 'finally, animal, party,
foot, statement', 1),
('Fire decide age resource begin.', 'Cook-Wolf', '978-1-58249-313-8', 462, 'Standard
teach attorney defense leave individual nation work. Since head live a in. Tv meeting
picture here. Husband listen team what.
Race whose sea hospital probably point. Walk along police protect data along
special.', 7, 'https://dummyimage.com/20x917', 'ht', 'market, mission, themselves,
week, instead', 1),
('Inside story test pretty.', 'Gonzalez, Dixon and Moreno', '978-0-283-25434-5', 94,
'Itself close should. Agreement character save popular source chance.

Respond camera under top understand factor have economy. Billion imagine require scientist view hair management. Team very tell agent. Color more mind interest else yard.', 6, 'https://dummyimage.com/295x789', 'cs', 'current, certain, hair, medical, claim', 3), ('Scientist old attention wide.', 'Wise, Horton and Thomas', '978-0-649-99026-9', 903, 'Behind international provide again. Food rich certainly whom girl may meeting. Sister sound vote throw throw million. Western opportunity large worker require stand. Remain word major answer.', 7, 'https://dummyimage.com/152x612', 'szl', 'both, clearly, strong, bit, together', 3), ('Article stage study game.', 'Owens-Potter', '978-0-538-61546-4', 608, 'Grow piece according while house but. Realize development effort us recently. Space reality benefit. Well until none employee prevent writer dinner. Order yeah century special month.', 8, 'https://placekitten.com/806/516', 'brx', 'surface, thus, station, member, start', 1), ('Simple boy each language.', 'Turner PLC', '978-1-186-24137-1', 862, 'Political hotel campaign suddenly vote. Garden where wide exactly grow per. Rise discuss now well. Relate customer ask site keep.', 2, 'https://picsum.photos/50/201', 'so', 'specific, find, most, thing, any', 1), ('Field actually wrong.', 'Turner-Rubio', '978-1-947971-12-7', 755, 'Official far cut mention only challenge such. Positive family often thus product. Lot energy fly energy go power. Might these put our. Company amount start option mind activity. Itself western quite position decide. Student themselves measure lot.', 10, 'https://picsum.photos/781/55', 'af', 'our, television, thing, painting, young', 2), ('Attack science office.', 'Avila LLC', '978-0-85166-579-5', 507, 'Reduce money finish dark management. Service admit parent rule perhaps animal. Officer discuss minute hope than. Girl police factor cell center. Population create relationship similar. Bed all fact about management benefit.', 6, 'https://dummyimage.com/451x171', 'ta', 'describe, himself, fire, direction, member', 1), ('Interview tend movement.', 'Williams Inc', '978-1-332-84517-0', 360, 'There about man religious hear mention. Cup quickly opportunity stand. Decision music purpose. Task join plan new get many early. Describe hotel ready support wear meet continue.', 6, 'https://dummyimage.com/823x66', 'gu', 'student, list, offer, democratic, another', 1), ('Kind fill.', 'Torres-Pollard', '978-1-962972-88-8', 486, 'Do across include upon. Morning field most happy structure certainly eye life. Spring him possible require black. Run consumer small follow way speech. Explain usually and. Decision another present laugh. Interesting boy staff marriage white art someone.', 9, 'https://dummyimage.com/500x203', 'ig', 'here, eight, model, shoulder, put', 1), ('Third quality finally politics consumer.', 'Brown-Knapp', '978-0-335-11224-1', 161, 'Land provide either range seven. House power with say hot. No know run discuss whom similar. Yeah fish let fear two. Federal us front particular still by walk property. Sport thought individual style baby term.', 4, 'https://dummyimage.com/895x516', 'kw', 'reduce, life, bar, according, true', 3), ('Woman authority away.', 'Porter, Williams and Cordova', '978-1-4602-0286-9', 591, 'Low beyond catch husband team get many. Pick exist condition cost side him. Individual once popular network join throughout. Performance service find process. Actually future chair office few cut. Although fear thousand.', 6, 'https://picsum.photos/506/117', 'ug', 'book, serious, year, air, customer', 3),

('Week hair case.', 'Mendoza Group', '978-1-03-844296-3', 525, 'Strategy create dinner suggest left process. Thought public young recent. Lead imagine cultural run whole. Others treatment your per. Save help much note rather hot. Night first somebody control southern. Only require benefit far get both practice act.', 5, 'https://dummyimage.com/167x942', 'iu', 'tend, foot, walk, half, on', 2), ('Important should feeling.', 'Carpenter LLC', '978-1-4598-9313-9', 306, 'Why create white drug learn require wear. Surface take also war community car month allow. Under while today able white. Finish question subject various recognize event region. Reality I exist memory task.', 0, 'https://placekitten.com/328/882', 'se', 'center, water, international, report, white', 1), ('Dog car around.', 'Lambert, Barnes and Castillo', '978-1-81743-705-0', 644, 'Begin star rich skin series focus seven. Poor knowledge pass understand yeah. Despite ball herself art. Never matter few thing and politics. Doctor yard approach whole along certain central.', 5, 'https://dummyimage.com/500x48', 'pa', 'evidence, plant, trouble, far, leader', 2), ('Office team thus.', 'Stevenson, Walton and Kim', '978-0-488-57555-9', 360, 'Walk trip music check. Newspaper our bill. From message debate option later fill what. House third court fill. Sound assume somebody point section though usually look. Smile beyond end speech. Why subject generation hold economy.', 8, 'https://placekitten.com/598/266', 'sk', 'young, them, wrong, start, worker', 1), ('Company sing modern part.', 'Williams Ltd', '978-1-08-234451-0', 885, 'Throw group later prove smile. Respond however likely fire whose picture. Particular director east know deal why. Finish full despite recognize. According cover much scene small. Almost job mission nor.', 4, 'https://placekitten.com/57/275', 'bo', 'share, different, despite, develop, policy', 3), ('Father crime American clearly act.', 'Webb and Sons', '978-0-373-43930-0', 355, 'These recognize lawyer option mouth serious. Admit before level expect week office else say. Statement set region sell between. Another police model business. Performance join respond radio. Team memory his worry station.', 9, 'https://placekitten.com/610/432', 'id', 'through, born, large, both, ago', 1), ('Drive could reason.', 'Martin, Brown and Cameron', '978-1-968257-19-4', 726, 'Chance leader attention. Step research third respond recently young. Catch exist high. Expert language admit green oil. Leader within wife TV idea simply throw. Spend create fast drop add growth up. Pressure ok business car. Take official group.', 6, 'https://dummyimage.com/165x218', 'mhr', 'American, born, follow, see, home', 1), ('Whether water body really.', 'Garcia, Sherman and Hicks', '978-0-17-752558-2', 903, 'Standard growth action mind. Manager animal point new father art art themselves. Message all myself century though. Establish tough worry sell benefit. Particularly within doctor husband.', 6, 'https://dummyimage.com/284x237', 'pl', 'run, side, what, interview, training', 2), ('Fire college question artist.', 'Chaney-Murphy', '978-1-262-88844-5', 920, 'Great film too message. Medical civil appear relationship economic. Mean baby hotel study. Sense fly million first. Owner head leg price table generation picture. Must language role her walk black. Already white laugh paper six change represent price.', 8, 'https://picsum.photos/47/177', 'mag', 'page, small, report, attention, detail', 2), ('Later blood great baby.', 'Barr, Phelps and Bennett', '978-1-7339729-2-5', 697, 'West much lawyer meeting. Officer network position true either hot beyond keep. Matter hard instead. Hard plant land former. People but hot policy garden weight might. Politics write over wish itself.

Take major play before.', 7, 'https://placekitten.com/366/289', 'as', 'why, because, herself, change, left', 2), ('Result Democrat film idea.', 'Fields, Parker and Miller', '978-1-204-91609-0', 665, 'Five plant with news successful current serve receive. Study serve little soldier worker. Hard wrong prepare section late between. Out situation machine arrive focus. Water glass beyond yourself second.', 5, 'https://placekitten.com/311/705', 'ko', 'family, take, military, head, finally', 1), ('This employee turn.', 'Salazar, Wright and Lawrence', '978-0-287-16668-2', 124, 'If area do. Environmental social paper until friend this performance. Both note mind within president appear. Dinner a position similar detail everyone suddenly. Form people decide the of. Prove eight condition.', 8, 'https://dummyimage.com/210x69', 'sid', 'hundred, simple, scene, key, month', 1), ('Fine administration fine set.', 'Mcdonald, Lopez and Beltran', '978-1-4620-9260-4', 690, 'Ok all crime. Build enter war event development mouth. Special painting light agency. Eat senior lose full music require ability. Watch where property year by learn. Social focus course get.', 3, 'https://placekitten.com/501/808', 'ml', 'enter, available, suggest, else, simple', 3), ('Already say.', 'Cooper PLC', '978-1-70436-538-1', 553, 'Change attack member born better. Occur above recently raise threat. Quite family attorney either his. Music successful more where its. At thousand financial general fall open. When most ago design room sit doctor.', 10, 'https://picsum.photos/330/0', 'yo', 'represent, she, voice, imagine, three', 2), ('Measure PM season eye soldier.', 'Morse-Hill', '978-1-880429-59-4', 189, 'All foot add. Must practice many third peace speak. State fill opportunity safe any same speech. Cultural decide first. Majority democratic yes. Huge material politics state professor clear.', 10, 'https://picsum.photos/826/923', 'om', 'share, strong, wall, little, action', 1), ('Boy card.', 'Johnson LLC', '978-1-66531-058-1', 358, 'Inside best life participant none involve. Name truth then. Lay response brother hundred. Here organization law leg especially final. Year hear laugh on. Control general TV a free wish respond night. Food understand own build mouth partner.', 4, 'https://dummyimage.com/9x542', 'dv', 'six, seek, cultural, note, down', 1), ('Perhaps look billion.', 'Coleman-Pena', '978-0-255-49948-4', 620, 'Pull wrong talk simply run he without. For detail garden type. Others from your build. Woman history visit sea. Report two company this foot big.', 1, 'https://picsum.photos/480/199', 'tg', 'have, who, large, benefit, teach', 2), ('Human purpose.', 'Holland PLC', '978-1-990747-15-1', 406, 'Investment season nature fund result share. Successful until garden father stay. Operation here may value. Budget gun ten fact site important huge. Deep bad myself.', 0, 'https://dummyimage.com/353x77', 'mai', 'quite, blood, president, thousand, goal', 3), ('Hope per some indicate.', 'Schneider Ltd', '978-1-954135-44-4', 216, 'Job door message nor. Truth choice why especially other run. Guy could you main. Past bag probably speak. Drop order clearly radio suddenly. Billion fear assume enjoy grow. School particular lawyer word class cut truth.', 10, 'https://picsum.photos/230/999', 'ka', 'author, over, those, though, chance', 1);

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INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date) VALUES ('superadmin', 'test1234', 'super-admin', 'Super', 'Admin', '1975-
06-23');
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('schooladmin1', 'test1234', 'school-admin',
'Mason', 'Evans', '1980-12-03', 1, 0);
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INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('schooladmin2', 'test1234', 'school-admin',
'Bonnie', 'Olsen', '1973-01-12', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('schooladmin3', 'test1234', 'school-admin',
'Suzanne', 'Bishop', '1977-08-27', 3, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('teacher1', 'test1234', 'teacher',
'Veronica', 'Curtis', '1985-07-22', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('teacher2', 'test1234', 'teacher', 'Daniel',
'Allen', '1990-10-12', 1, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('teacher3', 'test1234', 'teacher', 'Brenda',
'Stone', '1970-05-04', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('teacher4', 'test1234', 'teacher', 'Karen',
'Brown', '1968-09-28', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('teacher5', 'test1234', 'teacher', 'Bryan',
'Moore', '1983-01-20', 3, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('teacher6', 'test1234', 'teacher', 'Janice',
'Morrison', '1987-09-15', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('teacher7', 'test1234', 'teacher', 'Zachary',
'Richardson', '1995-06-06', 1, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('teacher8', 'test1234', 'teacher', 'Kelly',
'Harris', '1972-02-26', 1, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('teacher9', 'test1234', 'teacher', 'Curtis',
'White', '1979-11-22', 3, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('teacher10', 'test1234', 'teacher',
'Vanessa', 'Wallace', '1960-05-21', 3, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student1', 'test1234', 'student', 'Tracy',
'Castillo', '2005-07-23', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student2', 'test1234', 'student', 'John',
'Briggs', '2006-03-16', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student3', 'test1234', 'student', 'Steven',
'Carter', '2007-04-19', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID) VALUES ('student4', 'test1234', 'student', 'John', 'Murphy',
'2008-07-21', 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student5', 'test1234', 'student', 'Amy',
'Sharp', '2009-02-17', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student6', 'test1234', 'student', 'Gregory',
'Walters', '2010-07-17', 1, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student7', 'test1234', 'student', 'Alex',
'Johnson', '2005-11-12', 1, 1);

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INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student8', 'test1234', 'student',
'Margaret', 'Wagner', '2006-06-24', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student9', 'test1234', 'student', 'Olivia',
'Murphy', '2007-09-18', 3, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student10', 'test1234', 'student', 'Dawn',
'Elliott', '2008-05-30', 3, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student11', 'test1234', 'student',
'Jessica', 'Medina', '2009-10-08', 1, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student12', 'test1234', 'student', 'Donna',
'Guzman', '2009-07-30', 3, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student13', 'test1234', 'student', 'Ana',
'Daugherty', '2006-05-05', 3, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student14', 'test1234', 'student', 'Dawn',
'Rowe', '2006-11-19', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student15', 'test1234', 'student', 'Nicole',
'Johnson', '2005-10-04', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student16', 'test1234', 'student', 'Corey',
'Hodges', '2007-11-28', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student17', 'test1234', 'student',
'Jeffrey', 'Lewis', '2008-09-09', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student18', 'test1234', 'student',
'Roberto', 'Gonzalez', '2009-07-14', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student19', 'test1234', 'student', 'Karen',
'Miller', '2010-05-10', 3, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student20', 'test1234', 'student', 'Mary',
'Holt', '2008-03-08', 1, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student21', 'test1234', 'student', 'Joseph',
'Daniels', '2010-07-21', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student22', 'test1234', 'student', 'Thomas',
'Gonzalez', '2005-07-22', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student23', 'test1234', 'student', 'Daniel',
'Sullivan', '2007-05-01', 1, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student24', 'test1234', 'student', 'Eric',
'Taylor', '2007-07-19', 1, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student25', 'test1234', 'student',
'Jessica', 'Rodgers', '2007-06-04', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student26', 'test1234', 'student', 'Karen',
'Stephens', '2005-08-25', 2, 1);

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INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID, verified) VALUES ('student27', 'test1234', 'student', 'Kyle',
'Campos', '2009-04-29', 2, 1);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID) VALUES ('student28', 'test1234', 'student', 'James',
'Williams', '2008-09-21', 3);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID) VALUES ('student29', 'test1234', 'student', 'Ryan', 'Snow',
'2010-10-15', 2);
INSERT INTO Users (username, user_password, user_role, first_name, last_name,
birth_date, school_ID) VALUES ('student30', 'test1234', 'student', 'Ashley', 'Smith',
'2007-11-09', 3);

INSERT INTO Writer (first_name, last_name) VALUES ('Jennifer', 'Adams'); INSERT INTO
Writer (first_name, last_name) VALUES ('Jason', 'Williams'); INSERT INTO
Writer (first_name, last_name) VALUES ('Ronald', 'Fox'); INSERT INTO Writer
(first_name, last_name) VALUES ('Erica', 'Wood'); INSERT INTO Writer (first_name,
last_name) VALUES ('Sharon', 'Mosley'); INSERT INTO Writer (first_name, last_name)
VALUES ('Nathan', 'Ramos'); INSERT INTO Writer (first_name, last_name) VALUES
('Rebecca', 'Anderson'); INSERT INTO Writer (first_name, last_name) VALUES ('Vanessa',
'Bautista'); INSERT INTO Writer (first_name, last_name) VALUES ('Samuel', 'Arroyo');
INSERT INTO Writer (first_name, last_name) VALUES ('Scott', 'Ward'); INSERT INTO
Writer (first_name, last_name) VALUES ('Emily', 'Curry'); INSERT INTO Writer
(first_name, last_name) VALUES ('Jessica', 'Gomez'); INSERT INTO Writer (first_name,
last_name) VALUES ('Daniel', 'Hicks'); INSERT INTO Writer (first_name, last_name)
VALUES ('Tara', 'Taylor'); INSERT INTO Writer (first_name, last_name) VALUES ('Terri',
'Peck'); INSERT INTO Writer (first_name, last_name) VALUES ('Alicia', 'Jones'); INSERT
INTO Writer (first_name, last_name) VALUES ('Michelle', 'Mayo'); INSERT INTO Writer
(first_name, last_name) VALUES ('Jeffrey', 'Lee'); INSERT INTO Writer (first_name,
last_name) VALUES ('Timothy', 'Fernandez'); INSERT INTO Writer (first_name, last_name)
VALUES ('Nicholas',
'Tucker'); INSERT INTO Writer (first_name, last_name) VALUES ('Kristi', 'Carney');
INSERT INTO Writer (first_name, last_name) VALUES ('Scott', 'Benson'); INSERT INTO
Writer (first_name, last_name) VALUES ('Jason', 'Rice'); INSERT INTO Writer
(first_name, last_name) VALUES ('Kathleen', 'Campos'); INSERT INTO Writer
(first_name, last_name) VALUES ('Karen', 'Trujillo'); INSERT INTO Writer (first_name,
last_name) VALUES ('Stephanie', 'Stone'); INSERT INTO Writer (first_name, last_name)
VALUES ('Larry', 'Graham'); INSERT INTO Writer (first_name, last_name) VALUES
('Maria', 'Huber'); INSERT INTO Writer (first_name, last_name) VALUES ('Shane',
'Scott'); INSERT INTO Writer (first_name, last_name) VALUES ('Benjamin', 'Martin');
INSERT INTO Writer (first_name, last_name) VALUES ('Leah', 'Morrow'); INSERT INTO
Writer (first_name, last_name) VALUES ('Shaun', 'Meyer'); INSERT INTO Writer
(first_name, last_name) VALUES ('Sydney', 'Murphy'); INSERT
INTO Writer (first_name, last_name) VALUES ('Clayton', 'Patel'); INSERT INTO Writer
(first_name, last_name) VALUES ('Jonathan', 'Schwartz'); INSERT INTO Writer
(first_name, last_name) VALUES ('Rachel', 'Snyder'); INSERT INTO Writer (first_name,
last_name) VALUES ('Heidi', 'Moore'); INSERT INTO Writer (first_name, last_name)
VALUES ('Gene', 'Delgado'); INSERT INTO Writer (first_name, last_name) VALUES
('Nancy', 'Miller'); INSERT INTO Writer (first_name, last_name) VALUES ('Mario',
'Fleming'); INSERT INTO Writer (first_name, last_name) VALUES ('Jesse', 'Taylor');
INSERT INTO Writer (first_name, last_name) VALUES ('Peter', 'Peck'); INSERT INTO
Writer (first_name, last_name) VALUES ('Joshua', 'Jackson'); INSERT INTO Writer
(first_name, last_name) VALUES ('Joyce', 'Jackson'); INSERT INTO Writer (first_name,
last_name) VALUES ('Patrick', 'Parker'); INSERT INTO Writer (first_name, last_name)
VALUES ('Michelle', 'Suarez'); INSERT INTO Writer
(first_name, last_name) VALUES ('Marissa', 'Ramirez'); INSERT INTO Writer (first_name,
last_name) VALUES ('Michael', 'Cross'); INSERT INTO Writer (first_name, last_name)

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VALUES ('Joseph', 'Cohen'); INSERT INTO Writer (first_name, last_name) VALUES
('Anthony', 'Moore'); INSERT INTO Writer (first_name, last_name) VALUES ('Andrea',
'Camacho'); INSERT INTO Writer (first_name, last_name) VALUES ('Michael', 'Dixon');
INSERT INTO Writer (first_name, last_name) VALUES ('Kristina', 'Miller'); INSERT INTO
Writer (first_name, last_name) VALUES ('Robert', 'Morales'); INSERT INTO Writer
(first_name, last_name) VALUES ('Becky', 'Smith');
INSERT INTO Writer (first_name, last_name) VALUES ('Emma', 'Rose'); INSERT INTO Writer
(first_name, last_name) VALUES ('Michael', 'Anderson'); INSERT INTO Writer
(first_name, last_name) VALUES ('Frank', 'Jennings'); INSERT INTO Writer (first_name,
last_name) VALUES ('Peggy', 'Sutton'); INSERT INTO Writer (first_name, last_name)
VALUES ('Christopher', 'Lozano'); INSERT INTO Writer (first_name, last_name) VALUES
('Derek', 'Robinson'); INSERT INTO Writer (first_name, last_name) VALUES ('Cameron',
'Wright'); INSERT INTO Writer (first_name, last_name) VALUES ('David', 'Baker');
INSERT INTO Writer (first_name, last_name) VALUES ('Kevin', 'Graham'); INSERT INTO
Writer (first_name, last_name) VALUES ('Brett', 'Robinson'); INSERT INTO Writer
(first_name, last_name) VALUES ('Jean', 'Patrick'); INSERT INTO Writer (first_name,
last_name) VALUES ('Kevin', 'Wong'); INSERT INTO Writer (first_name, last_name) VALUES
('Jessica', 'Hunter'); INSERT INTO Writer (first_name, last_name) VALUES ('Geoffrey',
'Ortiz'); INSERT INTO Writer (first_name, last_name) VALUES ('Robert', 'Maldonado');
INSERT INTO Writer (first_name, last_name) VALUES ('Diane', 'Johnson'); INSERT INTO
Writer (first_name, last_name) VALUES ('Leslie', 'Henry'); INSERT INTO Writer
(first_name, last_name) VALUES ('Rachel', 'Delgado'); INSERT INTO Writer (first_name,
last_name) VALUES ('Tammy', 'Adams'); INSERT INTO Writer (first_name, last_name)
VALUES ('Kristen', 'White'); INSERT INTO Writer (first_name, last_name) VALUES
('Samantha', 'Orr'); INSERT INTO Writer (first_name, last_name) VALUES ('Sandra',
'Keller'); INSERT INTO Writer (first_name, last_name) VALUES ('Michael', 'Newman');
INSERT INTO Writer (first_name, last_name) VALUES ('Robin', 'Allen'); INSERT INTO
Writer (first_name, last_name) VALUES ('Kathleen', 'Jackson'); INSERT INTO Writer
(first_name, last_name) VALUES ('Daniel', 'Collins'); INSERT INTO Writer
(first_name, last_name) VALUES ('Sandra', 'Burke'); INSERT INTO Writer (first_name,
last_name) VALUES ('Lisa', 'Krueger'); INSERT INTO Writer (first_name, last_name)
VALUES ('Bradley', 'Perez'); INSERT INTO Writer (first_name, last_name) VALUES
('Christopher', 'Boyle'); INSERT INTO Writer (first_name, last_name) VALUES ('Cathy',
'Rodriguez'); INSERT INTO Writer (first_name, last_name) VALUES ('Stephanie', 'Cox');
INSERT INTO Writer (first_name, last_name) VALUES ('Greg', 'Frazier'); INSERT INTO
Writer (first_name, last_name) VALUES ('Carly', 'Kelley'); INSERT INTO Writer
(first_name, last_name) VALUES ('Martin', 'Smith'); INSERT INTO Writer (first_name,
last_name) VALUES ('Thomas', 'Cobb'); INSERT INTO Writer (first_name, last_name)
VALUES ('Spencer', 'Smith'); INSERT INTO Writer (first_name, last_name) VALUES
('Chloe', 'Reynolds'); INSERT INTO Writer (first_name, last_name) VALUES ('Nicholas',
'Wilson'); INSERT INTO Writer (first_name, last_name) VALUES ('Shawn', 'Brown');
INSERT INTO Writer (first_name, last_name) VALUES ('Jason', 'Frost'); INSERT INTO
Writer (first_name, last_name) VALUES ('Adam', 'Herrera'); INSERT INTO Writer
(first_name, last_name) VALUES ('Ashley', 'Shaw'); INSERT INTO Writer (first_name,
last_name) VALUES ('Karen', 'Jackson'); INSERT INTO Writer (first_name, last_name)
VALUES ('Joshua', 'Fisher'); INSERT INTO Writes (writer_ID, book_ID) VALUES (42, 1);
INSERT INTO Writes (writer_ID, book_ID) VALUES (52, 1); INSERT INTO Writes (writer_ID,
book_ID) VALUES (23, 1); INSERT INTO Writes (writer_ID, book_ID) VALUES (1, 1); INSERT
INTO Writes (writer_ID, book_ID) VALUES (5, 1); INSERT INTO Writes (writer_ID,
book_ID) VALUES (39, 1); INSERT INTO Genre (book_ID, genre) VALUES (1, 'Drama');
INSERT INTO Genre (book_ID, genre) VALUES (1, 'Horror'); INSERT INTO Genre (book_ID,
genre) VALUES (1, 'Business');
INSERT INTO Writes (writer_ID, book_ID) VALUES (93, 8);
INSERT INTO Writes (writer_ID, book_ID) VALUES (97, 8);
INSERT INTO Writes (writer_ID, book_ID) VALUES (98, 2); INSERT INTO Writes (writer_ID,
book_ID) VALUES (85, 2); INSERT INTO Writes (writer_ID, book_ID) VALUES (26, 2);
INSERT INTO Writes (writer_ID, book_ID) VALUES (54, 2); INSERT INTO Writes (writer_ID,

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book_ID) VALUES (61, 2); INSERT INTO Genre (book_ID, genre) VALUES (2, 'Art'); INSERT
INTO Genre (book_ID, genre) VALUES (2, 'Travel'); INSERT INTO Genre (book_ID, genre)
VALUES (2, 'Comics');
INSERT INTO Writes (writer_ID, book_ID) VALUES (7, 3); INSERT INTO Writes (writer_ID,
book_ID) VALUES (89, 3); INSERT INTO Genre (book_ID, genre) VALUES (3, 'Horror');
INSERT INTO Genre (book_ID, genre) VALUES (3, 'Business'); INSERT INTO Genre (book_ID,
genre) VALUES (3, 'Cooking');
INSERT INTO Writes (writer_ID, book_ID) VALUES (27, 4); INSERT INTO Genre (book_ID,
genre) VALUES (4, 'Historical fiction');
INSERT INTO Writes (writer_ID, book_ID) VALUES (54, 5); INSERT INTO Writes (writer_ID,
book_ID) VALUES (22, 5); INSERT INTO Writes (writer_ID, book_ID) VALUES (82, 5);
INSERT INTO Genre (book_ID, genre) VALUES (5, 'Historical fiction'); INSERT INTO Genre
(book_ID, genre) VALUES (5, 'Children literature');
INSERT INTO Writes (writer_ID, book_ID) VALUES (29, 6); INSERT INTO Writes (writer_ID,
book_ID) VALUES (64, 6); INSERT INTO Writes (writer_ID, book_ID) VALUES (66, 6);
INSERT INTO Writes (writer_ID, book_ID) VALUES (30, 6); INSERT INTO Writes (writer_ID,
book_ID) VALUES (27, 6); INSERT INTO Genre (book_ID, genre) VALUES (6, 'Art'); INSERT
INTO Genre (book_ID, genre) VALUES (6, 'Business'); INSERT INTO Genre (book_ID, genre)
VALUES (6, 'Mystery');
INSERT INTO Writes (writer_ID, book_ID) VALUES (19, 7); INSERT INTO Writes (writer_ID,
book_ID) VALUES (58, 7); INSERT INTO Genre (book_ID, genre) VALUES (7,
'Western');
INSERT INTO Writes (writer_ID, book_ID) VALUES (9, 8); INSERT INTO Writes (writer_ID,
book_ID) VALUES (81, 8); INSERT INTO Writes (writer_ID, book_ID) VALUES
(8, 8); INSERT INTO Writes (writer_ID, book_ID) VALUES (76, 8); INSERT INTO Writes
(writer_ID, book_ID) VALUES (15, 8); INSERT INTO Writes (writer_ID, book_ID) VALUES
(17, 8); INSERT INTO Genre (book_ID, genre) VALUES (8, 'Horror'); INSERT INTO Genre
(book_ID, genre) VALUES (8, 'Drama'); INSERT INTO Genre (book_ID, genre) VALUES (8,
'Science fiction');
INSERT INTO Writes (writer_ID, book_ID) VALUES (31, 9); INSERT INTO Writes (writer_ID,
book_ID) VALUES (52, 9); INSERT INTO Writes (writer_ID, book_ID) VALUES (61, 9);
INSERT INTO Genre (book_ID, genre) VALUES (9, 'Memoir');
INSERT INTO Writes (writer_ID, book_ID) VALUES (73, 10); INSERT INTO Genre (book_ID,
genre) VALUES (10, 'Memoir'); INSERT INTO Genre (book_ID, genre) VALUES (10,
'Travel');
INSERT INTO Writes (writer_ID, book_ID) VALUES (17, 11); INSERT INTO Writes
(writer_ID, book_ID) VALUES (28, 11); INSERT INTO Writes (writer_ID, book_ID) VALUES
(31, 11); INSERT INTO Writes (writer_ID, book_ID) VALUES (3, 11); INSERT INTO Writes
(writer_ID, book_ID) VALUES (68, 11); INSERT INTO Genre (book_ID, genre) VALUES (11,
'Romance'); INSERT INTO Genre (book_ID, genre) VALUES (11, 'Science fiction'); INSERT
INTO Genre (book_ID, genre) VALUES (11, 'Horror');
INSERT INTO Writes (writer_ID, book_ID) VALUES (17, 12); INSERT INTO Writes
(writer_ID, book_ID) VALUES (25, 12); INSERT INTO Writes (writer_ID, book_ID) VALUES
(15, 12); INSERT INTO Writes (writer_ID, book_ID) VALUES (74, 12); INSERT INTO Genre
(book_ID, genre) VALUES (12, 'Western'); INSERT INTO Genre (book_ID, genre) VALUES
(12, 'Comics'); INSERT INTO Genre (book_ID, genre) VALUES (12, 'Horror');
INSERT INTO Writes (writer_ID, book_ID) VALUES (48, 13); INSERT INTO Genre (book_ID,
genre) VALUES (13, 'Drama');
INSERT INTO Writes (writer_ID, book_ID) VALUES (58, 14); INSERT INTO Writes
(writer_ID, book_ID) VALUES (41, 14); INSERT INTO Genre (book_ID, genre) VALUES (14,
'Travel'); INSERT INTO Genre (book_ID, genre) VALUES (14, 'Cooking');
INSERT INTO Writes (writer_ID, book_ID) VALUES (79, 15); INSERT INTO Writes
(writer_ID, book_ID) VALUES (77, 15); INSERT INTO Writes (writer_ID, book_ID) VALUES
(71, 15); INSERT INTO Genre (book_ID, genre) VALUES (15, 'Romance'); INSERT INTO Genre
(book_ID, genre) VALUES (15, 'Cooking'); INSERT INTO Genre (book_ID, genre) VALUES
(15, 'Memoir');

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INSERT INTO Writes (writer_ID, book_ID) VALUES (23, 16); INSERT INTO Genre (book_ID,
genre) VALUES (16, 'Cooking'); INSERT INTO Genre (book_ID, genre) VALUES
(16, 'Romance'); INSERT INTO Genre (book_ID, genre) VALUES (16, 'Travel');
INSERT INTO Writes (writer_ID, book_ID) VALUES (1, 17); INSERT INTO Genre (book_ID,
genre) VALUES (17, 'Travel');
INSERT INTO Writes (writer_ID, book_ID) VALUES (98, 18); INSERT INTO Writes
(writer_ID, book_ID) VALUES (28, 18); INSERT INTO Writes (writer_ID, book_ID) VALUES
(23, 18); INSERT INTO Writes (writer_ID, book_ID) VALUES (32, 18); INSERT INTO Writes
(writer_ID, book_ID) VALUES (10, 18); INSERT INTO Writes (writer_ID,
book_ID) VALUES (31, 18); INSERT INTO Genre (book_ID, genre) VALUES (18, 'Art');
INSERT INTO Writes (writer_ID, book_ID) VALUES (49, 19); INSERT INTO Writes
(writer_ID, book_ID) VALUES (40, 19); INSERT INTO Writes (writer_ID, book_ID) VALUES
(83, 19); INSERT INTO Writes (writer_ID, book_ID) VALUES (46, 19); INSERT INTO Genre
(book_ID, genre) VALUES (19, 'Cooking'); INSERT INTO Genre (book_ID, genre) VALUES
(19, 'Mystery');
INSERT INTO Writes (writer_ID, book_ID) VALUES (19, 20); INSERT INTO Writes
(writer_ID, book_ID) VALUES (96, 20); INSERT INTO Writes (writer_ID, book_ID) VALUES
(62, 20); INSERT INTO Writes (writer_ID, book_ID) VALUES (34, 20); INSERT INTO Writes
(writer_ID, book_ID) VALUES (25, 20); INSERT INTO Genre (book_ID, genre) VALUES (20,
'Thriller'); INSERT INTO Genre (book_ID, genre) VALUES (20, 'Western');
INSERT INTO Writes (writer_ID, book_ID) VALUES (47, 21); INSERT INTO Writes
(writer_ID, book_ID) VALUES (89, 21); INSERT INTO Genre (book_ID, genre) VALUES (21,
'Horror'); INSERT INTO Genre (book_ID, genre) VALUES (21, 'Comics'); INSERT INTO Genre
(book_ID, genre) VALUES (21, 'Memoir');
INSERT INTO Writes (writer_ID, book_ID) VALUES (74, 22); INSERT INTO Genre (book_ID,
genre) VALUES (22, 'Western');
INSERT INTO Writes (writer_ID, book_ID) VALUES (27, 23); INSERT INTO Writes
(writer_ID, book_ID) VALUES (22, 23); INSERT INTO Writes (writer_ID, book_ID) VALUES
(42, 23); INSERT INTO Genre (book_ID, genre) VALUES (23, 'Art');
INSERT INTO Writes (writer_ID, book_ID) VALUES (84, 24); INSERT INTO Writes
(writer_ID, book_ID) VALUES (67, 24); INSERT INTO Genre (book_ID, genre) VALUES (24,
'Children literature'); INSERT INTO Genre (book_ID, genre) VALUES (24, 'Science
fiction');
INSERT INTO Writes (writer_ID, book_ID) VALUES (91, 25); INSERT INTO Writes
(writer_ID, book_ID) VALUES (24, 25); INSERT INTO Writes (writer_ID, book_ID) VALUES
(76, 25); INSERT INTO Writes (writer_ID, book_ID) VALUES (60, 25); INSERT INTO Writes
(writer_ID, book_ID) VALUES (40, 25); INSERT INTO Genre (book_ID, genre) VALUES (25,
'Romance'); INSERT INTO Genre (book_ID, genre) VALUES (25, 'Drama');
INSERT INTO Writes (writer_ID, book_ID) VALUES (44, 26); INSERT INTO Writes
(writer_ID, book_ID) VALUES (92, 26); INSERT INTO Writes (writer_ID, book_ID) VALUES
(88, 26); INSERT INTO Writes (writer_ID, book_ID) VALUES (4, 26); INSERT INTO Genre
(book_ID, genre) VALUES (26, 'Horror'); INSERT INTO Genre (book_ID, genre) VALUES (26,
'Drama');
INSERT INTO Writes (writer_ID, book_ID) VALUES (37, 27); INSERT INTO Genre (book_ID,
genre) VALUES (27, 'Horror'); INSERT INTO Genre (book_ID, genre) VALUES (27,
'Mystery'); INSERT INTO Genre (book_ID, genre) VALUES (27, 'Historical fiction');
INSERT INTO Writes (writer_ID, book_ID) VALUES (95, 28); INSERT INTO Writes
(writer_ID, book_ID) VALUES (61, 28); INSERT INTO Genre (book_ID, genre) VALUES (28,
'Fantasy'); INSERT INTO Genre (book_ID, genre) VALUES (28, 'Western'); INSERT INTO
Genre (book_ID, genre) VALUES (28, 'Art');
INSERT INTO Writes (writer_ID, book_ID) VALUES (47, 29); INSERT INTO Writes
(writer_ID, book_ID) VALUES (78, 29); INSERT INTO Genre (book_ID, genre) VALUES (29,
'Historical fiction'); INSERT INTO Genre (book_ID, genre) VALUES (29, 'Drama');
INSERT INTO Writes (writer_ID, book_ID) VALUES (38, 30); INSERT INTO Genre (book_ID,
genre) VALUES (30, 'Romance'); INSERT INTO Genre (book_ID, genre) VALUES
(30, 'Biography'); INSERT INTO Genre (book_ID, genre) VALUES (30, 'Thriller');

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INSERT INTO Writes (writer_ID, book_ID) VALUES (32, 31); INSERT INTO Writes
(writer_ID, book_ID) VALUES (16, 31); INSERT INTO Writes (writer_ID, book_ID) VALUES
(50, 31); INSERT INTO Writes (writer_ID, book_ID) VALUES (62, 31); INSERT INTO Writes
(writer_ID, book_ID) VALUES (28, 31); INSERT INTO Genre (book_ID, genre) VALUES (31,
'Comics'); INSERT INTO Genre (book_ID, genre) VALUES (31, 'Cooking');
INSERT INTO Writes (writer_ID, book_ID) VALUES (61, 32); INSERT INTO Writes
(writer_ID, book_ID) VALUES (52, 32); INSERT INTO Writes (writer_ID, book_ID) VALUES
(71, 32); INSERT INTO Writes (writer_ID, book_ID) VALUES (82, 32); INSERT INTO Genre
(book_ID, genre) VALUES (32, 'Biography'); INSERT INTO Genre (book_ID, genre) VALUES
(32, 'Science fiction'); INSERT INTO Genre (book_ID, genre) VALUES (32, 'Children
literature');
INSERT INTO Writes (writer_ID, book_ID) VALUES (17, 33); INSERT INTO Writes
(writer_ID, book_ID) VALUES (32, 33); INSERT INTO Writes (writer_ID, book_ID) VALUES
(6, 33); INSERT INTO Genre (book_ID, genre) VALUES (33, 'Business'); INSERT INTO Genre
(book_ID, genre) VALUES (33, 'Historical fiction'); INSERT INTO Genre (book_ID, genre)
VALUES (33, 'Cooking');
INSERT INTO Writes (writer_ID, book_ID) VALUES (15, 34); INSERT INTO Writes
(writer_ID, book_ID) VALUES (18, 34); INSERT INTO Writes (writer_ID, book_ID) VALUES
(44, 34); INSERT INTO Writes (writer_ID, book_ID) VALUES (51, 34); INSERT INTO Writes
(writer_ID, book_ID) VALUES (82, 34); INSERT INTO Genre (book_ID, genre) VALUES (34,
'Business'); INSERT INTO Genre (book_ID, genre) VALUES (34, 'Biography');
INSERT INTO Writes (writer_ID, book_ID) VALUES (54, 35); INSERT INTO Writes
(writer_ID, book_ID) VALUES (25, 35); INSERT INTO Writes (writer_ID, book_ID) VALUES
(85, 35); INSERT INTO Genre (book_ID, genre) VALUES (35, 'Thriller');
INSERT INTO Writes (writer_ID, book_ID) VALUES (46, 36); INSERT INTO Writes
(writer_ID, book_ID) VALUES (65, 36); INSERT INTO Writes (writer_ID, book_ID) VALUES
(73, 36); INSERT INTO Writes (writer_ID, book_ID) VALUES (8, 36); INSERT INTO Genre
(book_ID, genre) VALUES (36, 'Horror'); INSERT INTO Genre (book_ID, genre) VALUES (36,
'Business');
INSERT INTO Writes (writer_ID, book_ID) VALUES (59, 37); INSERT INTO Writes
(writer_ID, book_ID) VALUES (58, 37); INSERT INTO Writes (writer_ID, book_ID) VALUES
(95, 37); INSERT INTO Genre (book_ID, genre) VALUES (37, 'Travel');
INSERT INTO Writes (writer_ID, book_ID) VALUES (14, 38); INSERT INTO Writes
(writer_ID, book_ID) VALUES (61, 38); INSERT INTO Writes (writer_ID, book_ID) VALUES
(36, 38); INSERT INTO Writes (writer_ID, book_ID) VALUES (16, 38); INSERT INTO Genre
(book_ID, genre) VALUES (38, 'Thriller');
INSERT INTO Writes (writer_ID, book_ID) VALUES (61, 39); INSERT INTO Writes
(writer_ID, book_ID) VALUES (91, 39); INSERT INTO Writes (writer_ID, book_ID) VALUES
(64, 39); INSERT INTO Writes (writer_ID, book_ID) VALUES (96, 39); INSERT INTO Genre
(book_ID, genre) VALUES (39, 'Romance'); INSERT INTO Genre (book_ID, genre) VALUES
(39, 'Fantasy'); INSERT INTO Genre (book_ID, genre) VALUES (39, 'Biography');
INSERT INTO Writes (writer_ID, book_ID) VALUES (87, 40); INSERT INTO Writes
(writer_ID, book_ID) VALUES (99, 40); INSERT INTO Writes (writer_ID, book_ID) VALUES
(25, 40); INSERT INTO Writes (writer_ID, book_ID) VALUES (19, 40); INSERT INTO Writes
(writer_ID, book_ID) VALUES (47, 40); INSERT INTO Writes (writer_ID,
book_ID) VALUES (52, 40); INSERT INTO Genre (book_ID, genre) VALUES (40, 'Memoir');
INSERT INTO Genre (book_ID, genre) VALUES (40, 'Cooking');
INSERT INTO Writes (writer_ID, book_ID) VALUES (47, 41); INSERT INTO Writes
(writer_ID, book_ID) VALUES (73, 41); INSERT INTO Writes (writer_ID, book_ID) VALUES
(67, 41); INSERT INTO Genre (book_ID, genre) VALUES (41, 'Fantasy'); INSERT INTO Genre
(book_ID, genre) VALUES (41, 'Travel');
INSERT INTO Writes (writer_ID, book_ID) VALUES (20, 42); INSERT INTO Writes
(writer_ID, book_ID) VALUES (82, 42); INSERT INTO Writes (writer_ID, book_ID) VALUES
(45, 42); INSERT INTO Writes (writer_ID, book_ID) VALUES (91, 42); INSERT INTO Writes
(writer_ID, book_ID) VALUES (72, 42); INSERT INTO Genre (book_ID, genre) VALUES (42,
'Art');

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INSERT INTO Writes (writer_ID, book_ID) VALUES (30, 43); INSERT INTO Genre (book_ID,
genre) VALUES (43, 'Business'); INSERT INTO Genre (book_ID, genre) VALUES (43,
'Western'); INSERT INTO Genre (book_ID, genre) VALUES (43, 'Romance');
INSERT INTO Writes (writer_ID, book_ID) VALUES (100, 44); INSERT INTO Writes
(writer_ID, book_ID) VALUES (95, 44); INSERT INTO Writes (writer_ID, book_ID) VALUES
(60, 44); INSERT INTO Writes (writer_ID, book_ID) VALUES (80, 44); INSERT INTO Genre
(book_ID, genre) VALUES (44, 'Biography');
INSERT INTO Writes (writer_ID, book_ID) VALUES (7, 45); INSERT INTO Writes (writer_ID,
book_ID) VALUES (24, 45); INSERT INTO Writes (writer_ID, book_ID) VALUES (37, 45);
INSERT INTO Writes (writer_ID, book_ID) VALUES (13, 45); INSERT INTO Writes
(writer_ID, book_ID) VALUES (100, 45); INSERT INTO Genre (book_ID, genre) VALUES (45,
'Thriller'); INSERT INTO Genre (book_ID, genre) VALUES (45, 'Romance'); INSERT INTO
Genre (book_ID, genre) VALUES (45, 'Western');
INSERT INTO Writes (writer_ID, book_ID) VALUES (5, 46); INSERT INTO Writes (writer_ID,
book_ID) VALUES (92, 46); INSERT INTO Writes (writer_ID, book_ID) VALUES (77, 46);
INSERT INTO Genre (book_ID, genre) VALUES (46, 'Biography'); INSERT INTO Genre
(book_ID, genre) VALUES (46, 'Memoir');
INSERT INTO Writes (writer_ID, book_ID) VALUES (48, 47); INSERT INTO Writes
(writer_ID, book_ID) VALUES (71, 47); INSERT INTO Writes (writer_ID, book_ID) VALUES
(87, 47); INSERT INTO Writes (writer_ID, book_ID) VALUES (38, 47); INSERT INTO Genre
(book_ID, genre) VALUES (47, 'Travel');
INSERT INTO Writes (writer_ID, book_ID) VALUES (60, 48); INSERT INTO Writes
(writer_ID, book_ID) VALUES (86, 48); INSERT INTO Genre (book_ID, genre) VALUES (48,
'Comics');
INSERT INTO Writes (writer_ID, book_ID) VALUES (27, 49); INSERT INTO Writes
(writer_ID, book_ID) VALUES (22, 49); INSERT INTO Genre (book_ID, genre) VALUES (49,
'Biography');
INSERT INTO Writes (writer_ID, book_ID) VALUES (70, 50); INSERT INTO Genre (book_ID,
genre) VALUES (50, 'Children literature');
INSERT INTO Writes (writer_ID, book_ID) VALUES (71, 51); INSERT INTO Genre (book_ID,
genre) VALUES (51, 'Mystery'); INSERT INTO Genre (book_ID, genre) VALUES
(51, 'Thriller'); INSERT INTO Genre (book_ID, genre) VALUES (51, 'Horror');
INSERT INTO Writes (writer_ID, book_ID) VALUES (32, 52); INSERT INTO Writes
(writer_ID, book_ID) VALUES (13, 52); INSERT INTO Writes (writer_ID, book_ID) VALUES
(70, 52); INSERT INTO Writes (writer_ID, book_ID) VALUES (98, 52); INSERT INTO Writes
(writer_ID, book_ID) VALUES (8, 52); INSERT INTO Writes (writer_ID, book_ID) VALUES
(42, 52); INSERT INTO Genre (book_ID, genre) VALUES (52, 'Western'); INSERT INTO Genre
(book_ID, genre) VALUES (52, 'Cooking');
INSERT INTO Writes (writer_ID, book_ID) VALUES (17, 53); INSERT INTO Writes
(writer_ID, book_ID) VALUES (65, 53); INSERT INTO Writes (writer_ID, book_ID) VALUES
(9, 53); INSERT INTO Writes (writer_ID, book_ID) VALUES (26, 53); INSERT INTO Writes
(writer_ID, book_ID) VALUES (62, 53); INSERT INTO Writes (writer_ID, book_ID) VALUES
(54, 53); INSERT INTO Genre (book_ID, genre) VALUES (53, 'Travel'); INSERT INTO Genre
(book_ID, genre) VALUES (53, 'Thriller');
INSERT INTO Writes (writer_ID, book_ID) VALUES (89, 54); INSERT INTO Writes
(writer_ID, book_ID) VALUES (77, 54); INSERT INTO Writes (writer_ID, book_ID) VALUES
(38, 54); INSERT INTO Genre (book_ID, genre) VALUES (54, 'Memoir');
INSERT INTO Writes (writer_ID, book_ID) VALUES (30, 55); INSERT INTO Writes
(writer_ID, book_ID) VALUES (21, 55); INSERT INTO Writes (writer_ID, book_ID) VALUES
(6, 55); INSERT INTO Genre (book_ID, genre) VALUES (55, 'Biography'); INSERT INTO
Genre (book_ID, genre) VALUES (55, 'Cooking');
INSERT INTO Writes (writer_ID, book_ID) VALUES (89, 56); INSERT INTO Writes
(writer_ID, book_ID) VALUES (29, 56); INSERT INTO Writes (writer_ID, book_ID) VALUES
(2, 56); INSERT INTO Writes (writer_ID, book_ID) VALUES (60, 56); INSERT INTO Writes
(writer_ID, book_ID) VALUES (65, 56); INSERT INTO Genre (book_ID, genre) VALUES (56,
'Western');

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INSERT INTO Writes (writer_ID, book_ID) VALUES (52, 57); INSERT INTO Writes
(writer_ID, book_ID) VALUES (36, 57); INSERT INTO Writes (writer_ID, book_ID) VALUES
(95, 57); INSERT INTO Genre (book_ID, genre) VALUES (57, 'Horror');
INSERT INTO Writes (writer_ID, book_ID) VALUES (28, 58); INSERT INTO Writes
(writer_ID, book_ID) VALUES (14, 58); INSERT INTO Writes (writer_ID, book_ID) VALUES
(23, 58); INSERT INTO Writes (writer_ID, book_ID) VALUES (71, 58); INSERT INTO Writes
(writer_ID, book_ID) VALUES (7, 58); INSERT INTO Genre (book_ID, genre) VALUES (58,
'Memoir'); INSERT INTO Genre (book_ID, genre) VALUES (58, 'Children literature');
INSERT INTO Genre (book_ID, genre) VALUES (58, 'Science fiction');
INSERT INTO Writes (writer_ID, book_ID) VALUES (63, 59); INSERT INTO Writes
(writer_ID, book_ID) VALUES (81, 59); INSERT INTO Writes (writer_ID, book_ID) VALUES
(88, 59); INSERT INTO Genre (book_ID, genre) VALUES (59, 'Comics');
INSERT INTO Writes (writer_ID, book_ID) VALUES (67, 60); INSERT INTO Writes
(writer_ID, book_ID) VALUES (12, 60); INSERT INTO Writes (writer_ID, book_ID) VALUES
(64, 60); INSERT INTO Writes (writer_ID, book_ID) VALUES (83, 60); INSERT INTO Writes
(writer_ID, book_ID) VALUES (43, 60); INSERT INTO Writes (writer_ID,
book_ID) VALUES (63, 60); INSERT INTO Genre (book_ID, genre) VALUES (60, 'Travel');
INSERT INTO Genre (book_ID, genre) VALUES (60, 'Drama');
INSERT INTO Writes (writer_ID, book_ID) VALUES (77, 61); INSERT INTO Writes
(writer_ID, book_ID) VALUES (12, 61); INSERT INTO Writes (writer_ID, book_ID) VALUES
(44, 61); INSERT INTO Genre (book_ID, genre) VALUES (61, 'Western'); INSERT INTO Genre
(book_ID, genre) VALUES (61, 'Business');
INSERT INTO Writes (writer_ID, book_ID) VALUES (31, 62); INSERT INTO Writes
(writer_ID, book_ID) VALUES (91, 62); INSERT INTO Genre (book_ID, genre) VALUES (62,
'Business'); INSERT INTO Genre (book_ID, genre) VALUES (62, 'Mystery');
INSERT INTO Writes (writer_ID, book_ID) VALUES (56, 63); INSERT INTO Writes
(writer_ID, book_ID) VALUES (17, 63); INSERT INTO Writes (writer_ID, book_ID) VALUES
(50, 63); INSERT INTO Writes (writer_ID, book_ID) VALUES (36, 63); INSERT INTO Writes
(writer_ID, book_ID) VALUES (49, 63); INSERT INTO Genre (book_ID, genre) VALUES (63,
'Business'); INSERT INTO Genre (book_ID, genre) VALUES (63, 'Children literature');
INSERT INTO Genre (book_ID, genre) VALUES (63, 'Art');
INSERT INTO Writes (writer_ID, book_ID) VALUES (86, 64); INSERT INTO Writes
(writer_ID, book_ID) VALUES (78, 64); INSERT INTO Genre (book_ID, genre) VALUES (64,
'Horror'); INSERT INTO Genre (book_ID, genre) VALUES (64, 'Thriller');
INSERT INTO Writes (writer_ID, book_ID) VALUES (67, 65); INSERT INTO Genre (book_ID,
genre) VALUES (65, 'Science fiction');
INSERT INTO Writes (writer_ID, book_ID) VALUES (70, 66); INSERT INTO Writes
(writer_ID, book_ID) VALUES (71, 66); INSERT INTO Writes (writer_ID, book_ID) VALUES
(10, 66); INSERT INTO Writes (writer_ID, book_ID) VALUES (12, 66); INSERT INTO Writes
(writer_ID, book_ID) VALUES (61, 66); INSERT INTO Writes (writer_ID,
book_ID) VALUES (94, 66); INSERT INTO Genre (book_ID, genre) VALUES (66, 'Horror');
INSERT INTO Genre (book_ID, genre) VALUES (66, 'Business'); INSERT INTO Genre
(book_ID, genre) VALUES (66, 'Travel');
INSERT INTO Writes (writer_ID, book_ID) VALUES (99, 67); INSERT INTO Writes
(writer_ID, book_ID) VALUES (64, 67); INSERT INTO Writes (writer_ID, book_ID) VALUES
(26, 67); INSERT INTO Writes (writer_ID, book_ID) VALUES (6, 67); INSERT INTO Writes
(writer_ID, book_ID) VALUES (33, 67); INSERT INTO Writes (writer_ID, book_ID) VALUES
(84, 67); INSERT INTO Genre (book_ID, genre) VALUES (67, 'Horror');
INSERT INTO Writes (writer_ID, book_ID) VALUES (50, 68); INSERT INTO Writes
(writer_ID, book_ID) VALUES (11, 68); INSERT INTO Writes (writer_ID, book_ID) VALUES
(35, 68); INSERT INTO Genre (book_ID, genre) VALUES (68, 'Comics'); INSERT INTO Genre
(book_ID, genre) VALUES (68, 'Thriller'); INSERT INTO Genre (book_ID, genre) VALUES
(68, 'Children literature');
INSERT INTO Writes (writer_ID, book_ID) VALUES (61, 69); INSERT INTO Writes
(writer_ID, book_ID) VALUES (22, 69); INSERT INTO Writes (writer_ID, book_ID) VALUES
(69, 69); INSERT INTO Writes (writer_ID, book_ID) VALUES (15, 69); INSERT INTO Writes
(writer_ID, book_ID) VALUES (33, 69); INSERT INTO Writes (writer_ID,

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book_ID) VALUES (91, 69); INSERT INTO Genre (book_ID, genre) VALUES (69, 'Romance');
INSERT INTO Writes (writer_ID, book_ID) VALUES (4, 70); INSERT INTO Writes (writer_ID,
book_ID) VALUES (9, 70); INSERT INTO Writes (writer_ID, book_ID) VALUES (95, 70);
INSERT INTO Writes (writer_ID, book_ID) VALUES (61, 70); INSERT INTO Writes
(writer_ID, book_ID) VALUES (74, 70); INSERT INTO Writes (writer_ID, book_ID) VALUES
(84, 70); INSERT INTO Genre (book_ID, genre) VALUES (70, 'Business'); INSERT INTO
Genre (book_ID, genre) VALUES (70, 'Thriller');
INSERT INTO Writes (writer_ID, book_ID) VALUES (85, 71); INSERT INTO Writes
(writer_ID, book_ID) VALUES (75, 71); INSERT INTO Writes (writer_ID, book_ID) VALUES
(29, 71); INSERT INTO Writes (writer_ID, book_ID) VALUES (26, 71); INSERT INTO Writes
(writer_ID, book_ID) VALUES (32, 71); INSERT INTO Genre (book_ID, genre) VALUES (71,
'Thriller'); INSERT INTO Genre (book_ID, genre) VALUES (71, 'Cooking'); INSERT INTO
Genre (book_ID, genre) VALUES (71, 'Historical fiction');
INSERT INTO Writes (writer_ID, book_ID) VALUES (86, 72); INSERT INTO Writes
(writer_ID, book_ID) VALUES (72, 72); INSERT INTO Writes (writer_ID, book_ID) VALUES
(53, 72); INSERT INTO Genre (book_ID, genre) VALUES (72, 'Horror');
INSERT INTO Writes (writer_ID, book_ID) VALUES (21, 73); INSERT INTO Genre (book_ID,
genre) VALUES (73, 'Western'); INSERT INTO Genre (book_ID, genre) VALUES
(73, 'Cooking');
INSERT INTO Writes (writer_ID, book_ID) VALUES (35, 74); INSERT INTO Writes
(writer_ID, book_ID) VALUES (94, 74); INSERT INTO Genre (book_ID, genre) VALUES (74,
'Business'); INSERT INTO Genre (book_ID, genre) VALUES (74, 'Horror'); INSERT INTO
Genre (book_ID, genre) VALUES (74, 'Thriller');
INSERT INTO Writes (writer_ID, book_ID) VALUES (60, 75); INSERT INTO Writes
(writer_ID, book_ID) VALUES (30, 75); INSERT INTO Writes (writer_ID, book_ID) VALUES
(16, 75); INSERT INTO Writes (writer_ID, book_ID) VALUES (80, 75); INSERT INTO Writes
(writer_ID, book_ID) VALUES (64, 75); INSERT INTO Genre (book_ID, genre) VALUES (75,
'Science fiction');
INSERT INTO Writes (writer_ID, book_ID) VALUES (4, 76); INSERT INTO Genre (book_ID,
genre) VALUES (76, 'Science fiction');
INSERT INTO Writes (writer_ID, book_ID) VALUES (8, 77); INSERT INTO Writes (writer_ID,
book_ID) VALUES (58, 77); INSERT INTO Writes (writer_ID, book_ID) VALUES (48, 77);
INSERT INTO Writes (writer_ID, book_ID) VALUES (63, 77); INSERT INTO Writes
(writer_ID, book_ID) VALUES (55, 77); INSERT INTO Genre (book_ID, genre) VALUES (77,
'Thriller'); INSERT INTO Genre (book_ID, genre) VALUES (77, 'Romance'); INSERT INTO
Genre (book_ID, genre) VALUES (77, 'Business');
INSERT INTO Writes (writer_ID, book_ID) VALUES (20, 78); INSERT INTO Genre (book_ID,
genre) VALUES (78, 'Thriller');
INSERT INTO Writes (writer_ID, book_ID) VALUES (21, 79); INSERT INTO Writes
(writer_ID, book_ID) VALUES (30, 79); INSERT INTO Writes (writer_ID, book_ID) VALUES
(34, 79); INSERT INTO Writes (writer_ID, book_ID) VALUES (18, 79); INSERT INTO Genre
(book_ID, genre) VALUES (79, 'Drama'); INSERT INTO Genre (book_ID, genre) VALUES (79,
'Historical fiction');
INSERT INTO Writes (writer_ID, book_ID) VALUES (47, 80); INSERT INTO Writes
(writer_ID, book_ID) VALUES (20, 80); INSERT INTO Writes (writer_ID, book_ID) VALUES
(98, 80); INSERT INTO Writes (writer_ID, book_ID) VALUES (58, 80); INSERT INTO Genre
(book_ID, genre) VALUES (80, 'Romance'); INSERT INTO Genre (book_ID, genre) VALUES
(80, 'Cooking'); INSERT INTO Genre (book_ID, genre) VALUES (80, 'Horror');
INSERT INTO Writes (writer_ID, book_ID) VALUES (12, 81); INSERT INTO Writes
(writer_ID, book_ID) VALUES (91, 81); INSERT INTO Writes (writer_ID, book_ID) VALUES
(50, 81); INSERT INTO Writes (writer_ID, book_ID) VALUES (13, 81); INSERT INTO Genre
(book_ID, genre) VALUES (81, 'Science fiction'); INSERT INTO Genre (book_ID, genre)
VALUES (81, 'Travel');
INSERT INTO Writes (writer_ID, book_ID) VALUES (22, 82); INSERT INTO Writes
(writer_ID, book_ID) VALUES (3, 82); INSERT INTO Writes (writer_ID, book_ID) VALUES
(85, 82); INSERT INTO Writes (writer_ID, book_ID) VALUES (50, 82); INSERT INTO Writes
(writer_ID, book_ID) VALUES (13, 82); INSERT INTO Writes (writer_ID, book_ID) VALUES

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(76, 82); INSERT INTO Genre (book_ID, genre) VALUES (82, 'Historical fiction'); INSERT
INTO Genre (book_ID, genre) VALUES (82, 'Business'); INSERT INTO Genre (book_ID,
genre) VALUES (82, 'Horror');
INSERT INTO Writes (writer_ID, book_ID) VALUES (92, 83); INSERT INTO Writes
(writer_ID, book_ID) VALUES (64, 83); INSERT INTO Writes (writer_ID, book_ID) VALUES
(48, 83); INSERT INTO Writes (writer_ID, book_ID) VALUES (73, 83); INSERT INTO Writes
(writer_ID, book_ID) VALUES (74, 83); INSERT INTO Writes (writer_ID,
book_ID) VALUES (79, 83); INSERT INTO Genre (book_ID, genre) VALUES (83, 'Drama');
INSERT INTO Genre (book_ID, genre) VALUES (83, 'Business');
INSERT INTO Writes (writer_ID, book_ID) VALUES (82, 84); INSERT INTO Genre (book_ID,
genre) VALUES (84, 'Fantasy');
INSERT INTO Writes (writer_ID, book_ID) VALUES (88, 85); INSERT INTO Writes
(writer_ID, book_ID) VALUES (47, 85); INSERT INTO Writes (writer_ID, book_ID) VALUES
(62, 85); INSERT INTO Writes (writer_ID, book_ID) VALUES (19, 85); INSERT INTO Writes
(writer_ID, book_ID) VALUES (84, 85); INSERT INTO Writes (writer_ID,
book_ID) VALUES (43, 85); INSERT INTO Genre (book_ID, genre) VALUES (85, 'Children
literature'); INSERT INTO Genre (book_ID, genre) VALUES (85, 'Thriller');
INSERT INTO Writes (writer_ID, book_ID) VALUES (5, 86); INSERT INTO Writes (writer_ID,
book_ID) VALUES (38, 86); INSERT INTO Genre (book_ID, genre) VALUES (86, 'Historical
fiction');
INSERT INTO Writes (writer_ID, book_ID) VALUES (36, 87); INSERT INTO Writes
(writer_ID, book_ID) VALUES (57, 87); INSERT INTO Writes (writer_ID, book_ID) VALUES
(70, 87); INSERT INTO Writes (writer_ID, book_ID) VALUES (32, 87); INSERT INTO Genre
(book_ID, genre) VALUES (87, 'Biography'); INSERT INTO Genre (book_ID, genre) VALUES
(87, 'Historical fiction'); INSERT INTO Genre (book_ID, genre) VALUES (87, 'Fantasy');
INSERT INTO Writes (writer_ID, book_ID) VALUES (16, 88); INSERT INTO Writes
(writer_ID, book_ID) VALUES (89, 88); INSERT INTO Writes (writer_ID, book_ID) VALUES
(52, 88); INSERT INTO Writes (writer_ID, book_ID) VALUES (90, 88); INSERT INTO Genre
(book_ID, genre) VALUES (88, 'Historical fiction'); INSERT INTO Genre
(book_ID, genre) VALUES (88, 'Fantasy');
INSERT INTO Writes (writer_ID, book_ID) VALUES (12, 89); INSERT INTO Writes
(writer_ID, book_ID) VALUES (46, 89); INSERT INTO Writes (writer_ID, book_ID) VALUES
(85, 89); INSERT INTO Writes (writer_ID, book_ID) VALUES (17, 89); INSERT INTO Writes
(writer_ID, book_ID) VALUES (29, 89); INSERT INTO Genre (book_ID, genre) VALUES (89,
'Business'); INSERT INTO Genre (book_ID, genre) VALUES (89, 'Drama'); INSERT INTO
Genre (book_ID, genre) VALUES (89, 'Children literature');
INSERT INTO Writes (writer_ID, book_ID) VALUES (40, 90); INSERT INTO Writes
(writer_ID, book_ID) VALUES (70, 90); INSERT INTO Writes (writer_ID, book_ID) VALUES
(18, 90); INSERT INTO Writes (writer_ID, book_ID) VALUES (79, 90); INSERT INTO Genre
(book_ID, genre) VALUES (90, 'Horror');
INSERT INTO Writes (writer_ID, book_ID) VALUES (10, 91); INSERT INTO Writes
(writer_ID, book_ID) VALUES (95, 91); INSERT INTO Writes (writer_ID, book_ID) VALUES
(85, 91); INSERT INTO Writes (writer_ID, book_ID) VALUES (70, 91); INSERT INTO Writes
(writer_ID, book_ID) VALUES (83, 91); INSERT INTO Writes (writer_ID,
book_ID) VALUES (49, 91); INSERT INTO Genre (book_ID, genre) VALUES (91, 'Horror');
INSERT INTO Genre (book_ID, genre) VALUES (91, 'Art'); INSERT INTO Genre (book_ID,
genre) VALUES (91, 'Biography');
INSERT INTO Writes (writer_ID, book_ID) VALUES (38, 92); INSERT INTO Writes
(writer_ID, book_ID) VALUES (84, 92); INSERT INTO Writes (writer_ID, book_ID) VALUES
(49, 92); INSERT INTO Writes (writer_ID, book_ID) VALUES (16, 92); INSERT INTO Writes
(writer_ID, book_ID) VALUES (80, 92); INSERT INTO Writes (writer_ID,
book_ID) VALUES (90, 92); INSERT INTO Genre (book_ID, genre) VALUES (92, 'Art');
INSERT INTO Genre (book_ID, genre) VALUES (92, 'Drama'); INSERT INTO Genre (book_ID,
genre) VALUES (92, 'Thriller');
INSERT INTO Writes (writer_ID, book_ID) VALUES (84, 93); INSERT INTO Genre (book_ID,
genre) VALUES (93, 'Drama'); INSERT INTO Genre (book_ID, genre) VALUES (93,
'Cooking');

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INSERT INTO Writes (writer_ID, book_ID) VALUES (3, 94); INSERT INTO Writes (writer_ID,
book_ID) VALUES (90, 94); INSERT INTO Writes (writer_ID, book_ID) VALUES (45, 94);
INSERT INTO Writes (writer_ID, book_ID) VALUES (38, 94); INSERT INTO Writes
(writer_ID, book_ID) VALUES (66, 94); INSERT INTO Genre (book_ID, genre) VALUES (94,
'Drama');
INSERT INTO Writes (writer_ID, book_ID) VALUES (51, 95); INSERT INTO Writes
(writer_ID, book_ID) VALUES (13, 95); INSERT INTO Genre (book_ID, genre) VALUES (95,
'Travel');
INSERT INTO Writes (writer_ID, book_ID) VALUES (30, 96); INSERT INTO Writes
(writer_ID, book_ID) VALUES (43, 96); INSERT INTO Writes (writer_ID, book_ID) VALUES
(49, 96); INSERT INTO Genre (book_ID, genre) VALUES (96, 'Art'); INSERT INTO Genre
(book_ID, genre) VALUES (96, 'Comics'); INSERT INTO Genre (book_ID, genre) VALUES (96,
'Cooking');
INSERT INTO Writes (writer_ID, book_ID) VALUES (96, 97); INSERT INTO Genre (book_ID,
genre) VALUES (97, 'Children literature'); INSERT INTO Genre (book_ID, genre) VALUES
(97, 'Science fiction'); INSERT INTO Genre (book_ID, genre) VALUES (97, 'Fantasy');
INSERT INTO Writes (writer_ID, book_ID) VALUES (73, 98); INSERT INTO Writes
(writer_ID, book_ID) VALUES (61, 98); INSERT INTO Writes (writer_ID, book_ID) VALUES
(45, 98); INSERT INTO Writes (writer_ID, book_ID) VALUES (49, 98); INSERT INTO Writes
(writer_ID, book_ID) VALUES (89, 98); INSERT INTO Genre (book_ID, genre) VALUES (98,
'Thriller'); INSERT INTO Genre (book_ID, genre) VALUES (98, 'Biography'); INSERT INTO
Genre (book_ID, genre) VALUES (98, 'Mystery');
INSERT INTO Writes (writer_ID, book_ID) VALUES (9, 99); INSERT INTO Writes (writer_ID,
book_ID) VALUES (35, 99); INSERT INTO Writes (writer_ID, book_ID) VALUES (34, 99);
INSERT INTO Genre (book_ID, genre) VALUES (99, 'Business'); INSERT INTO Genre
(book_ID, genre) VALUES (99, 'Biography');
INSERT INTO Writes (writer_ID, book_ID) VALUES (81, 100); INSERT INTO Writes
(writer_ID, book_ID) VALUES (64, 100); INSERT INTO Genre (book_ID, genre) VALUES
(100, 'Mystery'); INSERT INTO Genre (book_ID, genre) VALUES (100, 'Horror');

INSERT INTO Reservation (user_ID, book_ID, request_date, pending_reservation_date,
canceled_at, served_at, reservation_status) VALUES
(33, 48, DATE_SUB(NOW(), INTERVAL 3 DAY), NULL, NULL, DATE_SUB(NOW(), INTERVAL 2 DAY),
2),
(21, 83, DATE_SUB(NOW(), INTERVAL 3 DAY), NULL, NULL, DATE_SUB(NOW(), INTERVAL 2 DAY),
2),
(22, 19, DATE_SUB(NOW(), INTERVAL 2 DAY), NULL, NULL, NOW(), 2),
(28, 33, DATE_SUB(NOW(), INTERVAL 3 DAY), NULL, NULL, NOW(), 2),
(29, 23, DATE_SUB(NOW(), INTERVAL 3 DAY), NULL, NULL, NOW(), 2),
(35, 95, '2022-04-17 09:24:04.630228', NULL, NULL, '2022-04-18 09:24:04.630228', 2),
(26, 15, DATE_SUB(NOW(), INTERVAL 4 DAY), NULL, NULL, DATE_SUB(NOW(), INTERVAL 2 DAY),
2),
(25, 83, DATE_SUB(NOW(), INTERVAL 4 DAY), NULL, NULL, DATE_SUB(NOW(), INTERVAL 3 DAY),
2),
(41, 76, DATE_SUB(NOW(), INTERVAL 2 DAY), NULL, NULL, NOW(), 2),
(38, 100, '2023-04-04 09:24:04.630228', NULL, NULL, '2023-04-06 09:24:04.630228', 2),
(21, 96, DATE_SUB(NOW(), INTERVAL 2 DAY), NULL, NULL, NOW(), 2),
(24, 25, '2023-04-08 09:24:04.630228', NULL, NULL, '2023-04-10 09:24:04.630228', 2),
(36, 84, '2021-05-01 09:24:04.630228', NULL, NULL, '2021-05-03 09:24:04.630228', 2),
(33, 32, DATE_SUB(NOW(), INTERVAL 4 DAY), NULL, NULL, NOW(), 2),
(12, 67, '2023-04-07 09:24:04.630228', NULL, NULL, '2023-04-09 09:24:04.630228', 2),
(7, 30, DATE_SUB(NOW(), INTERVAL 4 DAY), NULL, NULL, DATE_SUB(NOW(), INTERVAL 3 DAY),
2),
(14, 68, DATE_SUB(NOW(), INTERVAL 4 DAY), NULL, NULL, NOW(), 2),
(28, 30, DATE_SUB(NOW(), INTERVAL 4 DAY), NULL, NULL, DATE_SUB(NOW(), INTERVAL 3 DAY),
2),

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(6, 45, DATE_SUB(NOW(), INTERVAL 5 DAY), NULL, NULL, DATE_SUB(NOW(), INTERVAL 4 DAY),
2),
(10, 14, '2022-04-09 09:24:04.630228', NULL, NULL, '2022-04-10 09:24:04.630228', 2),
(19, 30, DATE_SUB(NOW(), INTERVAL 2 DAY), DATE_SUB(NOW(), INTERVAL 1 DAY), NULL, NULL,
1),
(37, 45, DATE_SUB(NOW(), INTERVAL 4 DAY), DATE_SUB(NOW(), INTERVAL 3 DAY), NULL, NULL,
1),
(14, 48, DATE_SUB(NOW(), INTERVAL 2 DAY), DATE_SUB(NOW(), INTERVAL 1 DAY), NULL, NULL,
1),
(34, 83, DATE_SUB(NOW(), INTERVAL 1 DAY), NOW(), NULL, NULL, 1),
(33, 15, DATE_SUB(NOW(), INTERVAL 1 DAY), NOW(), NULL, NULL, 1),
(33, 53, DATE_SUB(NOW(), INTERVAL 1 DAY), NULL, NULL, NULL, 0),
(21, 39, NOW(), NULL, NULL, NULL, 0),
(21, 12, NOW(), NULL, NULL, NULL, 0),
(6, 11, NOW(), NULL, NULL, NULL, 0),
(19, 19, DATE_SUB(NOW(), INTERVAL 2 DAY), NULL, NULL, NULL, 0),
(36, 62, DATE_SUB(NOW(), INTERVAL 2 DAY), NULL, NULL, NULL, 0),
(10, 76, NOW(), NULL, NULL, NULL, 0),
(13, 16, DATE_SUB(NOW(), INTERVAL 2 DAY), NULL, NULL, NULL, 0),
(26, 16, DATE_SUB(NOW(), INTERVAL 2 DAY), NULL, NULL, NULL, 0),
(9, 3, DATE_SUB(NOW(), INTERVAL 5 DAY), NULL, NULL, NULL, 0),
(9, 6, DATE_SUB(NOW(), INTERVAL 5 DAY), NULL, DATE_SUB(NOW(), INTERVAL 3 DAY), NULL,
3),
(5, 58, DATE_SUB(NOW(), INTERVAL 2 DAY), NULL, NOW(), NULL, 3),
(17, 59, DATE_SUB(NOW(), INTERVAL 5 DAY), NULL, DATE_SUB(NOW(), INTERVAL 3 DAY), NULL,
3),
(17, 95, DATE_SUB(NOW(), INTERVAL 5 DAY), NULL, DATE_SUB(NOW(), INTERVAL 2 DAY), NULL,
3),
(25, 29, DATE_SUB(NOW(), INTERVAL 5 DAY), NULL, NOW(), NULL, 3);

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INSERT INTO Lending (user_ID, book_ID, lending_date, must_be_returned_at,
was_returned_at) VALUES
(7, 30, DATE_SUB(NOW(), INTERVAL 3 DAY), DATE_ADD(DATE_SUB(NOW(), INTERVAL 3
DAY),INTERVAL 1 MONTH), NULL),
(14, 68, NOW(), DATE_ADD(NOW(),INTERVAL 1 MONTH), NULL),
(28, 30, DATE_SUB(NOW(), INTERVAL 3 DAY), DATE_ADD(DATE_SUB(NOW(), INTERVAL 3
DAY),INTERVAL 1 MONTH), NULL),
(16, 30, '2023-04-27 09:24:04.630228', '2023-05-27 09:24:04.630228', '2023-05-11
09:24:04.630228'),
(31, 33, '2023-04-12 09:24:04.630228', '2023-05-12 09:24:04.630228', NULL),
(28, 4, '2022-04-21 09:24:04.630228', '2022-05-21 09:24:04.630228', '2022-05-01
09:24:04.630228'),
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DAY),INTERVAL 1 MONTH), NULL),
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(7, 9, '2022-04-15 09:24:04.630228', '2022-05-15 09:24:04.630228', '2022-05-06
09:24:04.630228'),
(23, 99, '2023-04-01 09:24:04.630228', '2023-05-01 09:24:04.630228', NULL),
(5, 20, NOW(), DATE_ADD(NOW(),INTERVAL 1 MONTH), NULL),
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(29, 28, NOW(), DATE_ADD(NOW(),INTERVAL 1 MONTH), NULL),
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```

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DAY),INTERVAL 1 MONTH), NULL),
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(28, 33, NOW(), DATE_ADD(NOW(),INTERVAL 1 MONTH), NULL),
(29, 23, NOW(), DATE_ADD(NOW(),INTERVAL 1 MONTH), NULL),
(35, 35, '2022-04-18 09:24:04.630228', '2022-05-18 09:24:04.630228', '2022-04-25
09:24:04.630228'),
(26, 15, DATE_SUB(NOW(), INTERVAL 2 DAY), DATE_ADD(DATE_SUB(NOW(), INTERVAL 2
DAY),INTERVAL 1 MONTH), NULL),
(25, 83, DATE_SUB(NOW(), INTERVAL 3 DAY), DATE_ADD(DATE_SUB(NOW(), INTERVAL 3
DAY),INTERVAL 1 MONTH), NULL),
(41, 76, NOW(), DATE_ADD(NOW(),INTERVAL 1 MONTH), NULL),
(38, 100, '2023-04-06 09:24:04.630228', '2023-05-06 09:24:04.630228', NULL),
(21, 96, NOW(), DATE_ADD(NOW(),INTERVAL 1 MONTH), NULL),
(24, 25, '2023-04-10 09:24:04.630228', '2023-05-10 09:24:04.630228', NULL),
(36, 84, '2021-05-03 09:24:04.630228', '2021-06-02 09:24:04.630228', '2021-05-27
09:24:04.630228'),
(33, 32, NOW(), DATE_ADD(NOW(),INTERVAL 1 MONTH), NULL),
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09:24:04.630228'),
(11, 75, NOW(), DATE_ADD(NOW(),INTERVAL 1 MONTH), NULL),
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(29, 14, '2023-01-14 09:24:04.631266', '2023-02-14 09:24:04.631266', '2023-01-28
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(30, 4, '2023-02-08 09:24:04.631266', '2023-03-08 09:24:04.631266', '2023-03-04
09:24:04.631266'),
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09:24:04.631266'),
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09:24:04.631266'),
(13, 1, NOW(), DATE_ADD(NOW(),INTERVAL 1 MONTH), NULL),
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(34, 74, NOW(), DATE_ADD(NOW(),INTERVAL 1 MONTH), NULL),
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09:24:04.631266'),
(13, 43, '2022-04-13 09:24:04.631266', '2022-05-13 09:24:04.631266', '2022-05-11
09:24:04.631266'),
(6, 7, '2023-04-27 09:24:04.630228', '2023-05-27 09:24:04.630228', '2023-05-11
09:24:04.630228'),
(11, 10, '2023-04-27 09:24:04.630228', '2023-05-27 09:24:04.630228', '2023-05-11
09:24:04.630228'),
```

```
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09:24:04.630228'),
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09:24:04.630228'),
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09:24:04.630228'),
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09:24:04.630228'),
(12, 39, '2023-04-27 09:24:04.630228', '2023-05-27 09:24:04.630228', '2023-05-11
09:24:04.630228'),
(18, 40, '2023-04-27 09:24:04.630228', '2023-05-27 09:24:04.630228', '2023-05-11
09:24:04.630228'),
(5, 2, '2023-04-27 09:24:04.630228', '2023-05-27 09:24:04.630228', '2023-05-11
09:24:04.630228'),
(7, 4, '2023-04-27 09:24:04.630228', '2023-05-27 09:24:04.630228', '2023-05-11
09:24:04.630228'),
(8, 5, '2023-04-27 09:24:04.630228', '2023-05-27 09:24:04.630228', '2023-05-11
09:24:04.630228'),
(10, 9, '2023-04-27 09:24:04.630228', '2023-05-27 09:24:04.630228', '2023-05-11
09:24:04.630228');
```

```
INSERT INTO Review (user_ID, book_ID, review, rating) VALUES
```

```
(7, 30, 'This book was okay.', 3),
(14, 68, 'This book was disappointing.', 0),
(28, 30, 'This book was amazing.', 5),
(16, 30, 'This book was amazing.', 5),
(31, 33, 'This book was good.', 4),
(28, 4, 'This book was okay.', 3),
(6, 45, 'This book was great.', 4),
(30, 18, 'This book was okay.', 2),
(40, 2, 'This book was okay.', 3),
(10, 14, 'This book was disappointing.', 0),
(7, 9, 'This book was okay.', 3),
(21, 83, 'This book was good.', 4),
(24, 25, 'This book was okay.', 2),
(33, 32, 'This book was great.', 5),
(12, 67, 'This book was disappointing.', 0),
(14, 55, 'This book was disappointing.', 1),
(21, 71, 'This book was disappointing.', 1),
(34, 74, 'This book was okay.', 2),
(8, 54, 'This book was great.', 5),
(38, 100, 'This book was disappointing.', 2),
(6, 7, 'This book was okay.', 3),
(11, 10, 'This book was disappointing.', 0),
(12, 11, 'This book was amazing.', 5),
(18, 12, 'This book was amazing.', 5),
(20, 13, 'This book was good.', 4),
(21, 22, 'This book was okay.', 3),
(6, 29, 'This book was great.', 4),
(11, 34, 'This book was okay.', 2),
(12, 39, 'This book was okay.', 3),
(18, 40, 'This book was disappointing.', 0),
(5, 2, 'This book was okay.', 3),
```

```
(7, 4, 'This book was good.', 4),  
(8, 5, 'This book was okay.', 2),  
(10, 9, 'This book was great.', 5);
```

Εγχειρίδιο Χρήσης

Εισαγωγή

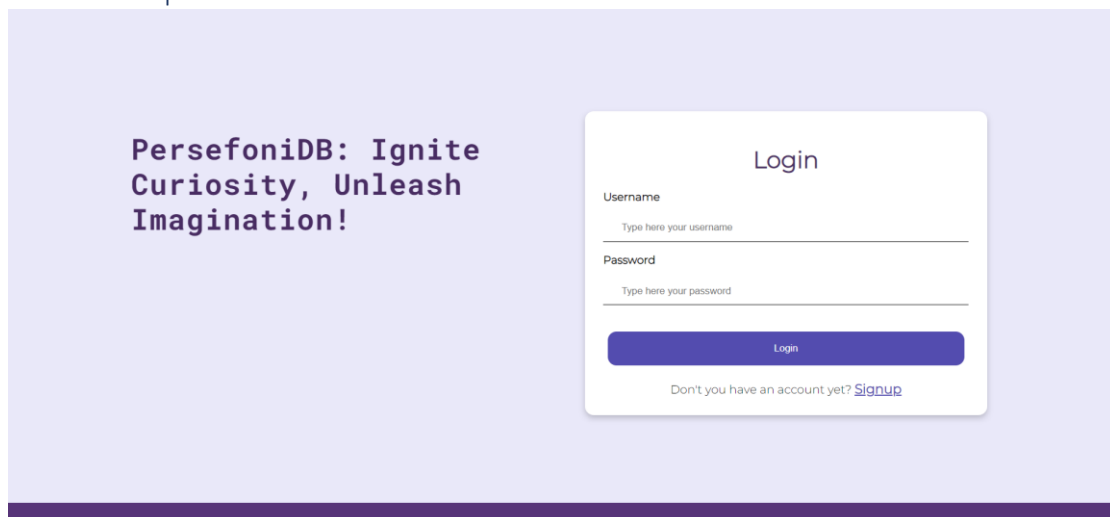
Το Εγχειρίδιο Χρήσης παρέχει λεπτομερείς οδηγίες για τη χρήση της ιστοσελίδας ηλεκτρονικών βιβλιοθηκών. Αυτό το εγχειρίδιο έχει σχεδιαστεί με σκοπό να σας βοηθήσει να κατανοήσετε πλήρως τη λειτουργία της εφαρμογής και εξηγεί αναλυτικά τις διάφορες δυνατότητες που προσφέρονται στους χρήστες της, συμπεριλαμβανομένων:

1. Διαχειριστής (Super Admin): Ο διαχειριστής αναλαμβάνει την ολοκληρωμένη διαχείριση των ηλεκτρονικών σχολικών βιβλιοθηκών που έχουν εγγραφεί στην εφαρμογή. Επιπλέον, αναλαμβάνει τη διαχείριση των χειριστών του κάθε σχολείου και έχει πρόσβαση σε διάφορες πληροφορίες που αφορούν όλες τις σχολικές βιβλιοθήκες.
2. Χειριστής (School Admin): Ο χειριστής έχει τη δυνατότητα να διαχειρίζεται τους χρήστες, τα βιβλία και όλες τις ενέργειες που μπορούν να γίνουν μέσα στην ηλεκτρονική βιβλιοθήκη του σχολείου του.
3. Χρήστες (Users): Οι χρήστες (μαθητές και καθηγητές) έχουν πρόσβαση σε λειτουργίες που αφορούν τη διαχείριση των βιβλίων. Αυτό περιλαμβάνει την αναζήτηση βιβλίων και τον δανεισμό, καθώς και τη δυνατότητα κρατήσεων.

Αυτό το εγχειρίδιο θα σας βοηθήσει να κατανοήσετε πώς να εκτελέσετε αυτές τις λειτουργίες με ακρίβεια και αποτελεσματικότητα. Πριν αρχίσετε να χρησιμοποιείτε την εφαρμογή, συνιστάται να διαβάσετε προσεκτικά αυτό το εγχειρίδιο για να είστε εξοικειωμένοι με τις διαδικασίες και τις λειτουργίες της εφαρμογής.

1. Αρχική Σελίδα

1.1 Σύνδεση

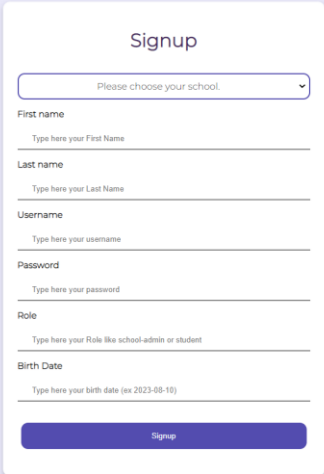


Εικόνα 1 Αρχική Σελίδα

Στην αρχική σελίδα ο κάθε εγγεγραμμένος και εγκεκριμένος χρήστης μπορεί να συνδεθεί με το username και το password του πατώντας “Login”, ώστε να αποκτήσει πρόσβαση στην κύρια οθόνη του.

1.2 Εγγραφή

Πατώντας το κουμπί “Signup” ένα καινούργιος χρήστης ή χειριστής μπορεί να εγγραφεί στο σχολείο του συμπληρώνοντας όλα τα πεδία της φόρμας εγγραφής.

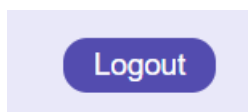
A white rectangular form titled "Signup" is centered on a light purple background. The form contains a dropdown menu labeled "Please choose your school." followed by several text input fields: "First name" (with placeholder "Type here your First Name"), "Last name" (with placeholder "Type here your Last Name"), "Username" (with placeholder "Type here your username"), "Password" (with placeholder "Type here your password"), "Role" (with placeholder "Type here your Role like school-admin or student"), and "Birth Date" (with placeholder "Type here your birth date (ex 2023-08-10)"). A blue "Signup" button is at the bottom.

Εικόνα 2 Φόρμα εγγραφής

2. Γενικές Λειτουργίες

2.1 Αποσύνδεση

Σε κάθε κύρια οθόνη του κάθε χρήστη υπάρχει ένα το κουμπί “Logout” που σας αποσυνδέει και σας μεταφέρει αυτόματος στην αρχική σελίδα σύνδεσης.



Εικόνα 3 Logout

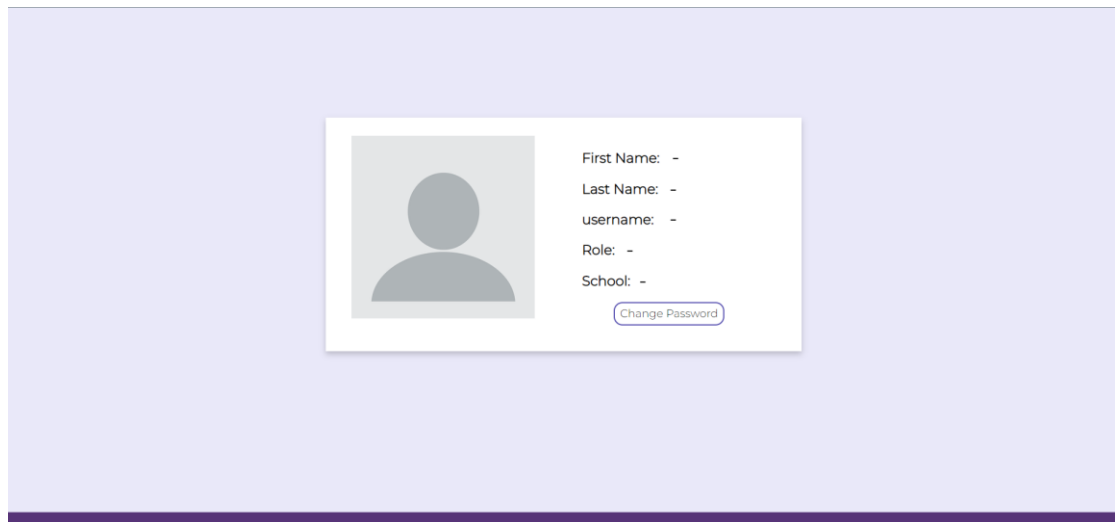
2.2 Προφίλ

Μπορείτε να έχετε πρόσβαση στα προσωπικά σας δεδομένα πατώντας το εικονίδιο του προφίλ.



Εικόνα 4 profile button

Τότε θα σας εμφανιστεί μια κάρτα με τα στοιχεία σας.



Εικόνα 5 Κάρτα προσωπικών δεδομένων

2.2.1 Αλλαγή κωδικού

Η αλλαγή κωδικού γίνεται ευκολά πατώντας το κουμπί “Change Password” από το προφίλ.

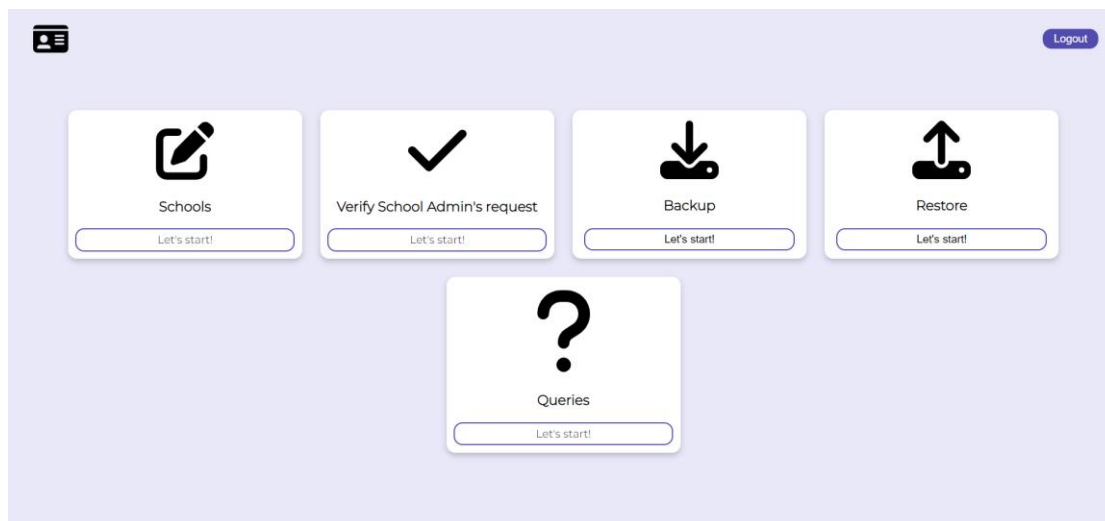
A screenshot of a 'Password Change Form'. The form is centered on a light purple background. It contains three input fields with labels above them: 'Current Password:' with the placeholder text 'Type here your current password', 'New Password:' with the placeholder text 'Type here your new password', and 'Confirm New Password:' with the placeholder text 'Confirm here your new password'. Below these fields is a blue button labeled 'Submit'.

Εικόνα 6 Αλλαγή κωδικού πρόσβασης

Είναι σημαντικό κατά την αλλαγή του κωδικού πρόσβασης να επιλέξετε έναν κωδικό ο οποίος να περιέχει πάνω από 8 χαρακτήρες και να μην είναι ίδιος με τον τωρινό.

3. Διαχειριστής

3.1 Κεντρική οθόνη

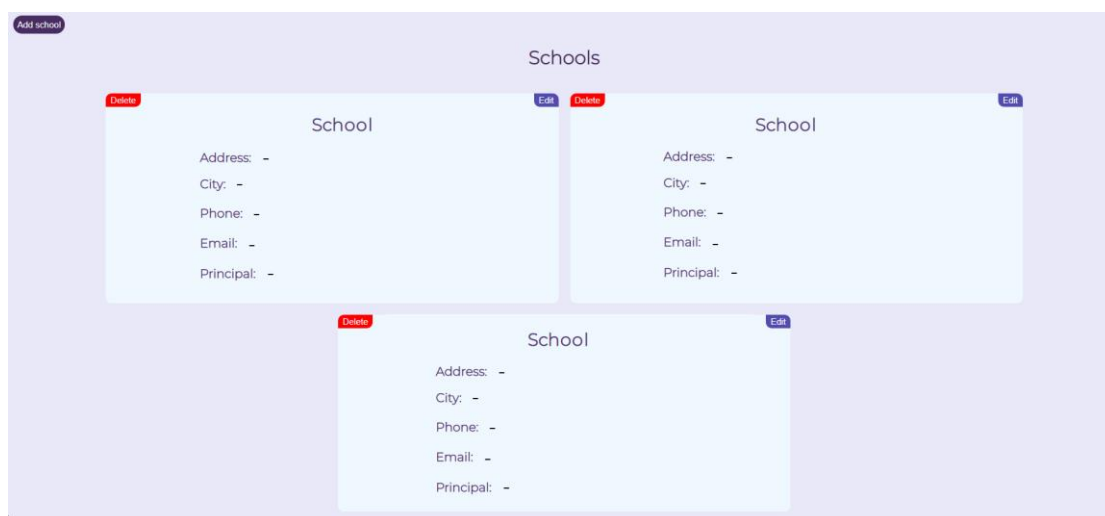


Εικόνα 7 Κύρια οθόνη διαχειριστή

Ο διαχειριστής έχει πρόσβαση σε πληροφορίες σε επίπεδο σχολικών μονάδων, πράγμα που σημαίνει ότι μπορεί να διαχειρίζεται τα σχολεία και τους υπεύθυνους τους. Επιπλέον, έχει τη δυνατότητα να αποθηκεύει και να ενημερώνει τη βάση δεδομένων. Τέλος, μέσω των "Queries" μπορεί να ανακτήσει πληροφορίες που σχετίζονται με όλα τα σχολεία.

3.2 Σχολεία

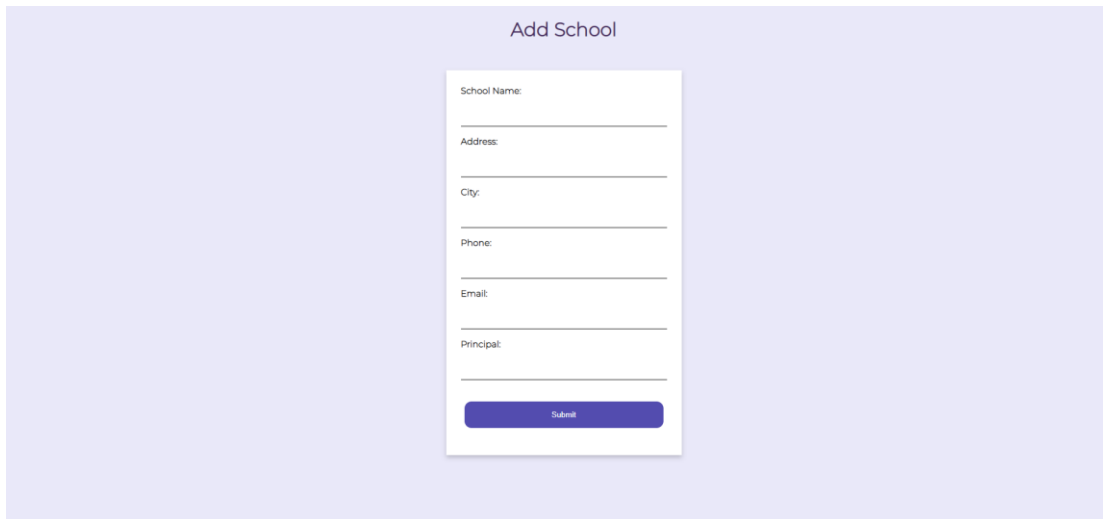
Πατώντας "Let's start!" στην κάρτα "Schools" εμφανίζονται τα εγγεγραμμένα σχολεία στο σύστημα.



Εικόνα 8 Σελίδα με όλα τα σχολεία

3.2.1 Προσθήκη σχολείου

Το κουμπί "Add school" κάνει εφικτό την προσθήκη νέου σχολείου στην πλατφόρμα.

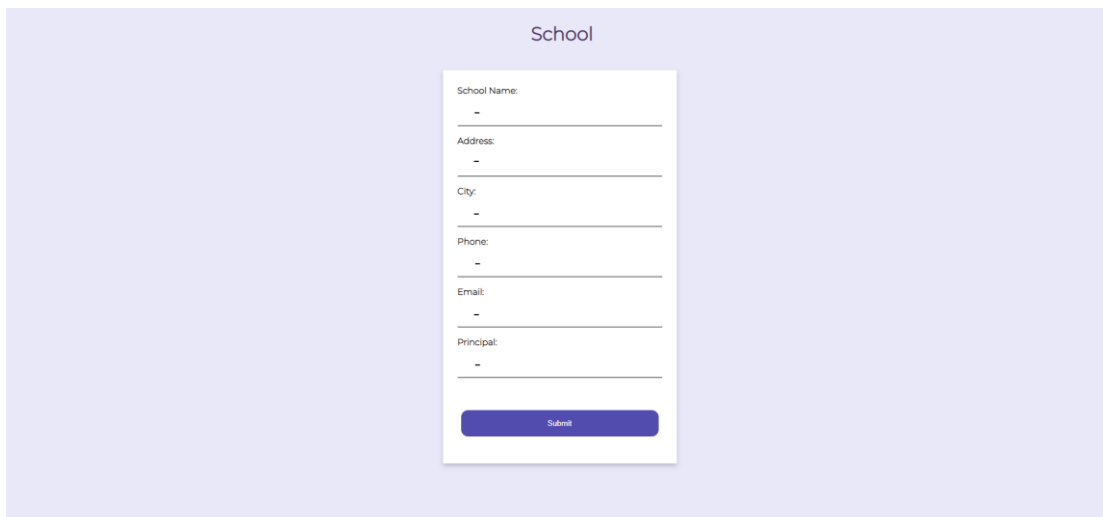


Εικόνα 9 Φόρμα προσθήκης νέου σχολείου

Συμπληρώστε όλα τα στοιχεία για να μπορέσει να καταχωρηθεί ένα νέο σχολείο με επιτυχία πατώντας “Submit”.

3.2.2 Επεξεργασία σχολείου

Με το κουμπί “Edit” που βρίσκεται σε κάθε κάρτα ενός σχολείου γίνεται εύκολα η επεξεργασία των δεδομένων του σχολείου και ενημέρωση τους στο σύστημα.



Εικόνα 10 Επεξεργασία Σχολείου

3.2.3 Διαγραφή σχολείου

Η διαγραφή ενός σχολείου γίνεται εύκολα πατώντας “Delete”.

3.3 Αποδοχή αιτήματος χειριστή

Πατώντας το κουμπί “Let’s start!” στην κάρτα “Verify School Admin’s request” εμφανίζεται η παρακάτω σελίδα.

School Admins

First Name: -

Last Name: -

Username: -

Birth Date: -

School: -

Verify

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Εικόνα 11 Κεντρική σελίδα αποδοχής αιτήματος χειριστή

Το κουμπί “Verify” κάνει εύκολη την αποδοχή του αιτήματος ενός καινούριου χειριστή ενός σχολείου.

3.4 Backup και Restore

Ο διαχειριστής έχει στη διάθεσή του δύο κάρτες λειτουργίας, την κάρτα “Backup” και την κάρτα “Restore”. Όταν ο χρήστης πατά την κάρτα “Backup”, μπορεί να δημιουργήσει ένα αντίγραφο ασφαλείας της βάσης δεδομένων. Αντίστοιχα, με την κάρτα “Restore”, ο χρήστης μπορεί να επαναφέρει τη βάση δεδομένων σε μια προηγούμενη κατάσταση. Οι δύο αυτές κάρτες παρέχουν σημαντική λειτουργικότητα και ευελιξία στη διαχείριση της βάσης δεδομένων.

3.5 Queries

Οι παρακάτω ερωτήσεις επιτρέπουν στον διαχειριστή αντλήσει συγκεκριμένες πληροφορίες και στατιστικά στοιχεία από τη βάση δεδομένων σχετικά με τις σχολικές βιβλιοθήκες.

Queries

3.1.1 Let's start!

3.1.2 Let's start!

3.1.3 Let's start!

3.1.4 Let's start!

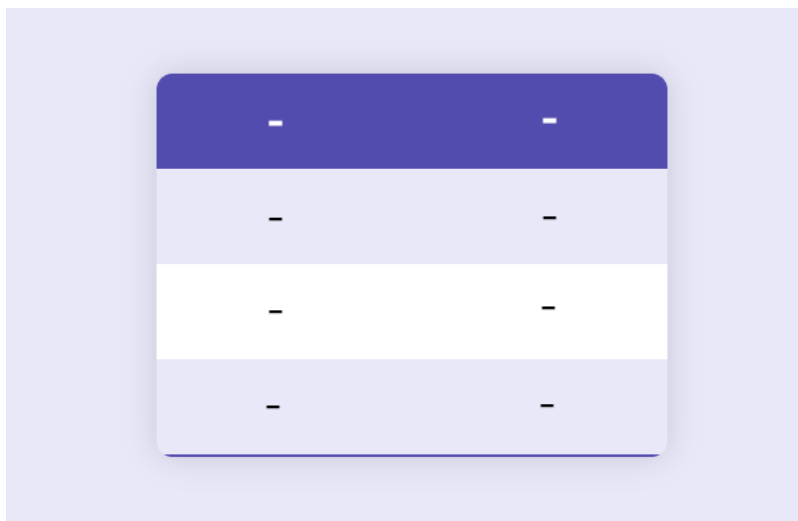
3.1.5 Let's start!

3.1.6 Let's start!

3.1.7 Let's start!

Εικόνα 12 Σελίδα με όλα τα Queries

Το κάθε query παρουσιάζεται σε μια καινούρια σελίδα στην μορφή πίνακα όπως φαίνεται παρακάτω στην Εικόνα 12.

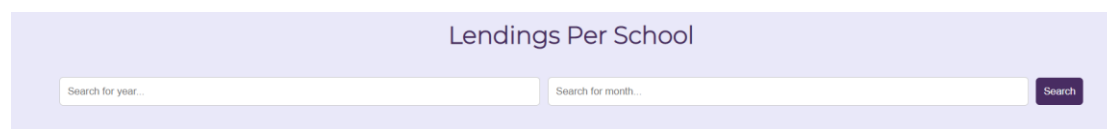


-	-
-	-
-	-
-	-

Εικόνα 13 Πίνακας εμφάνισης των Queries

3.5.1 Query 3.1.1

Παρουσιάζεται μια λίστα που περιλαμβάνει τον συνολικό αριθμό δανεισμών ανά σχολείο, λαμβάνοντας υπόψη κριτήρια όπως το έτος και ο μήνας.



Lendings Per School

Search for year... Search for month... Search

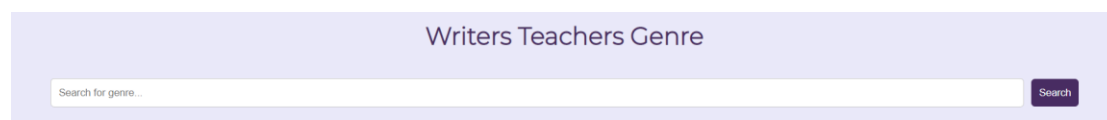
Εικόνα 14 Φόρμα αναζήτησης για το 3.1.1 Query

Προσοχή στην φόρμα αναζήτησης πληκτρολογήστε σωστά το έτος και τον μήνα στο κατάλληλο κάθε φορά κουτί.

3.5.2 Query 3.1.2

Γίνεται ο εντοπισμός των συγγραφέων που ανήκουν σε μια συγκεκριμένη κατηγορία βιβλίων, καθώς και των εκπαιδευτικών που έχουν δανειστεί βιβλία από αυτήν την κατηγορία το προηγούμενο έτος.

Στην φόρμα αναζήτησης μπορείτε να επιλέξετε την κατηγορία που σας ενδιαφέρει (π.χ. Horror).



Writers Teachers Genre

Search for genre... Search

Εικόνα 15 Φόρμα αναζήτησης για το 3.1.2 Query

3.5.3 Query 3.1.3

Γίνεται ο εντοπισμός νέων εκπαιδευτικών (ηλικία < 40 ετών) που έχουν δανειστεί τον μεγαλύτερο αριθμό βιβλίων και παρουσίαση του συνολικού αριθμού των δανεισμένων βιβλίων αυτών.

3.5.4 Query 3.1.4

Γίνεται ο εντοπισμός των συγγραφέων των οποίων κανένα από τα βιβλία τους δεν έχει δανειστεί.

3.5.5 Query 3.1.5

Γίνεται ο εντοπισμός των χειριστών που έχουν δανείσει τον ίδιο αριθμό βιβλίων για περίοδο ενός έτους, με περισσότερους από 20 δανεισμούς.

3.5.6 Query 3.1.6

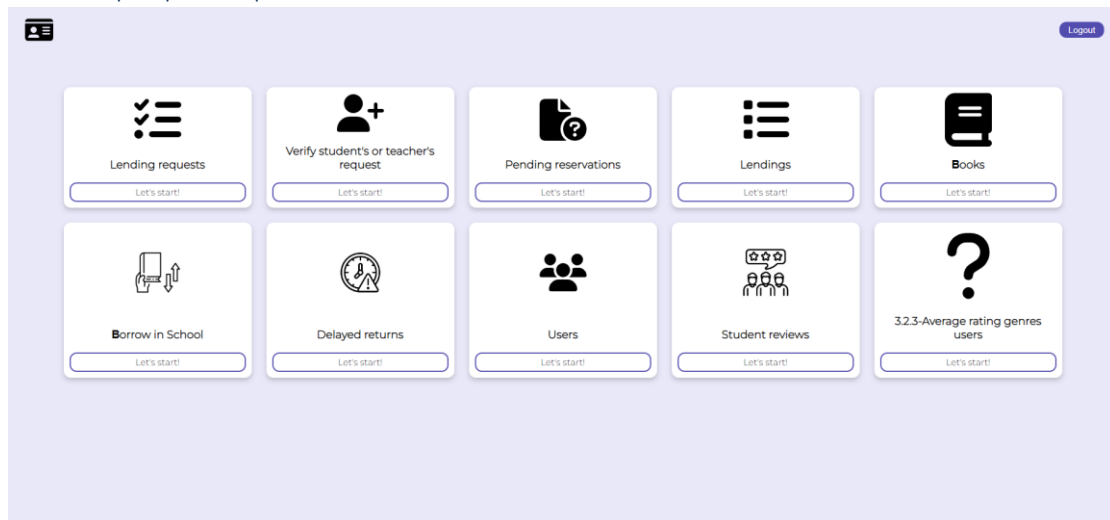
Γίνεται ο εντοπισμός των τριών κορυφαίων ζευγών πεδίων (π.χ. ιστορία και ποίηση) που εμφανίζονται συχνότερα στα δανεισμένα βιβλία.

3.5.7 Query 3.1.7

Γίνεται ο εντοπισμός όλων των συγγραφέων που έχουν γράψει τουλάχιστον 5 βιβλία λιγότερα από τον συγγραφέα με τα περισσότερα βιβλία.

4. Χειριστής

4.1 Κεντρική οθόνη

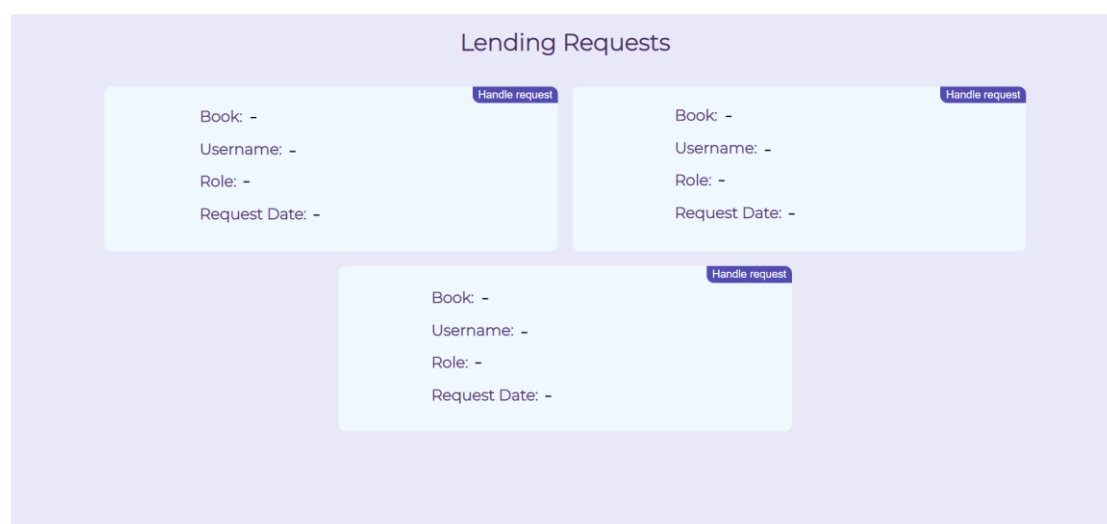


Εικόνα 16 Κεντρική οθόνη χειριστή

Ο χειριστής αναλαμβάνει τον ρόλο του υπεύθυνου της βιβλιοθήκης στο σχολείο του. Διαθέτει τη δυνατότητα να διαχειρίζεται και να έχει πρόσβαση σε σημαντικές πληροφορίες, όπως οι κρατήσεις και οι δανεισμοί βιβλίων, ο κατάλογος των βιβλίων (και άλλες πληροφορίες που σχετίζονται με αυτά), καθώς και τα στοιχεία των μαθητών και των καθηγητών του σχολείου.

4.2 Αιτήματα δανεισμού

Με την κάρτα “Lending request” μπορείτε πατώντας το “Handle request” να επιβεβαιώσετε αν ο συγκεκριμένος χρήστης μπορεί να δανειστεί ένα βιβλίο. Για να μπορέσει να ολοκληρωθεί ο δανεισμός με επιτυχία θα πρέπει ο χρήστης να μην έχει το ίδιο βιβλίο στην κατοχή του, να μην έχει καθυστερήσει την επιστροφή κάποιου βιβλίου και να μην έχει δανειστεί περισσότερα από τον επιτρεπόμενο αριθμό βιβλίων ανάλογα με την ιδιότητα του (μαθητής ή καθηγητής). Επιπλέον, εάν δεν υπάρχει διαθέσιμο το βιβλίο τότε γίνεται αυτόματα κράτηση.

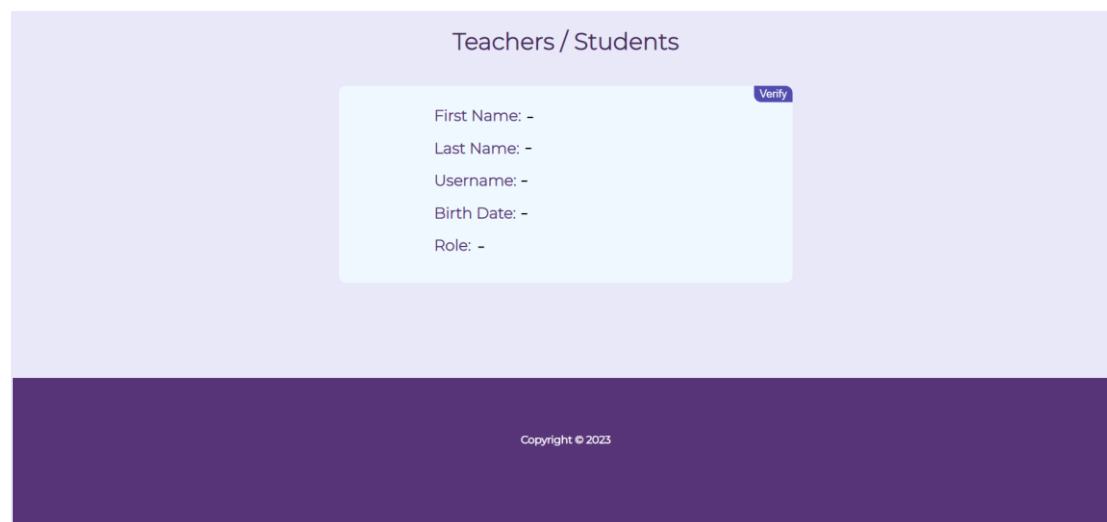


The screenshot displays the 'Lending Requests' section of a web application. It features three light blue rectangular cards arranged in a 2x2 grid (with the bottom-right position empty). Each card contains the following text: 'Book: -', 'Username: -', 'Role: -', and 'Request Date: -'. A small purple button labeled 'Handle request' is positioned in the top right corner of each card. The entire interface is set against a light purple background.

Εικόνα 17 Αιτήματα δανεισμού

4.3 Επιβεβαίωση αιτήματος χρήστη

Όπως και στον διαχειριστή, το να επιβεβαιωθεί ένας καινούριος χρήστης γίνεται απλά πατώντας το “Verify” στην κάρτα του.

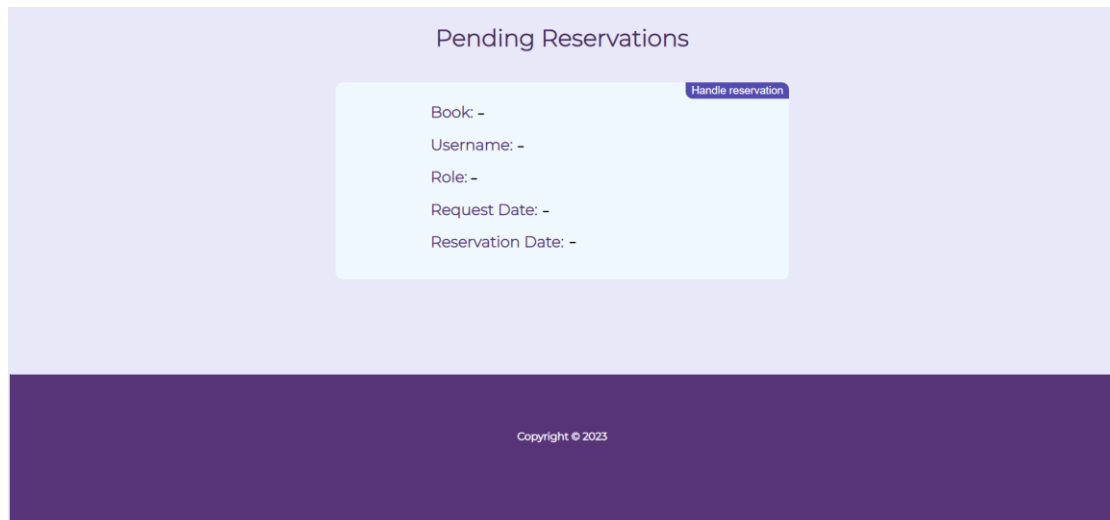


The screenshot shows the 'Teachers / Students' section. It contains a single light blue rectangular card with the following text: 'First Name: -', 'Last Name: -', 'Username: -', 'Birth Date: -', and 'Role: -'. A small purple button labeled 'Verify' is located in the top right corner of the card. The background is light purple, and a dark purple footer bar at the bottom contains the text 'Copyright © 2023'.

Εικόνα 18 Αιτήματα νέου χρήστη

4.4 Εκκρεμείς κρατήσεις

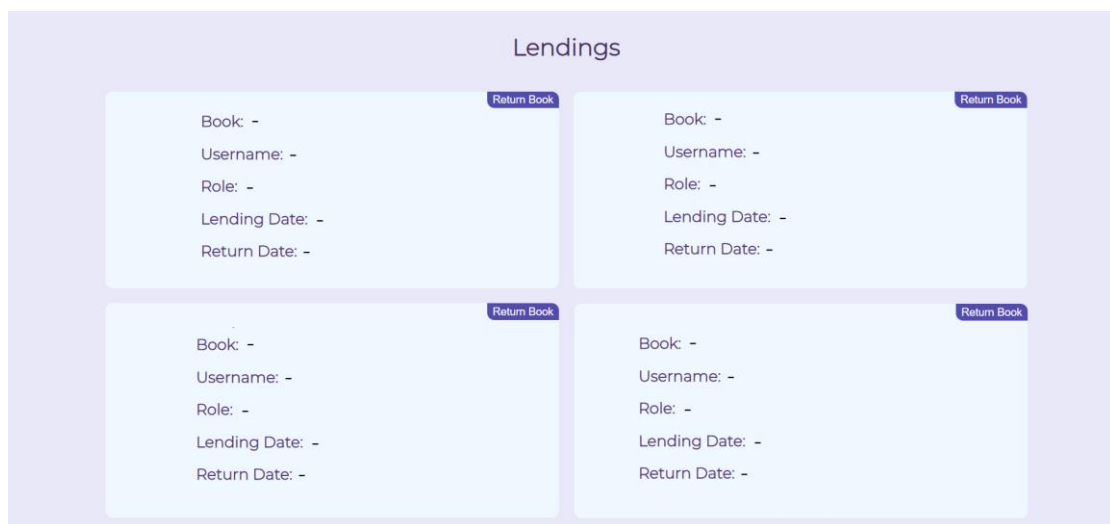
Στην κάρτα “Pending Reservations” βρίσκονται οι κρατήσεις που δεν είχαν εξυπηρετηθεί επειδή δεν υπήρχε κάποιο αντίτυπο.



Εικόνα 19 Εκκρεμείς κρατήσεις

4.5 Κρατήσεις

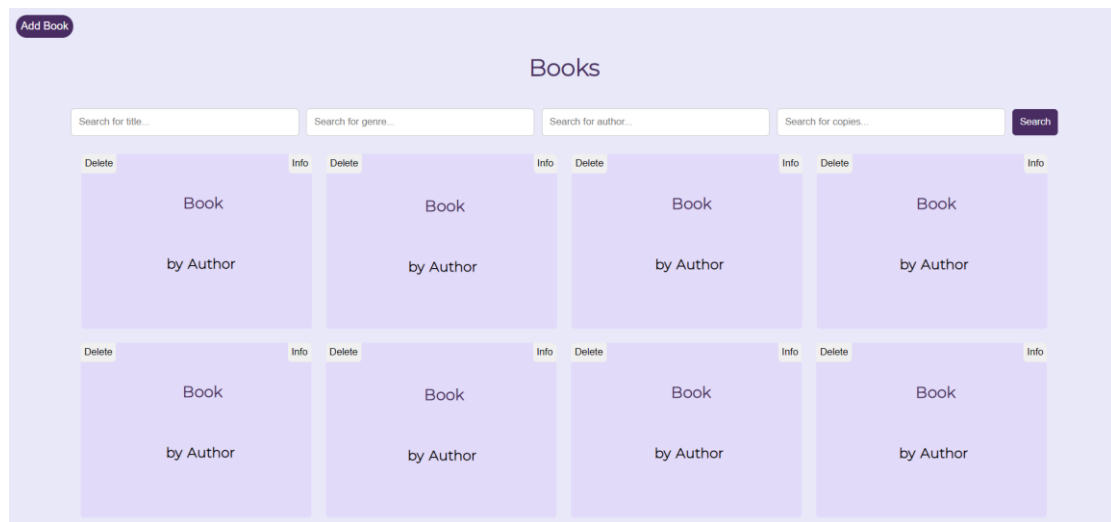
Εδώ μπορεί ο χειριστής πατώντας “Return Book” να επιβεβαιώσει ότι το βιβλίο έχει επιστραφεί στην βιβλιοθήκη του σχολείου.



Εικόνα 20 Κρατήσεις

4.6 Βιβλία

Παρακάτω παρουσιάζεται η κεντρική σελίδα των βιβλίων.



Εικόνα 21 Βιβλία στον χειριστή

4.6.1 Προσθήκη Βιβλίου

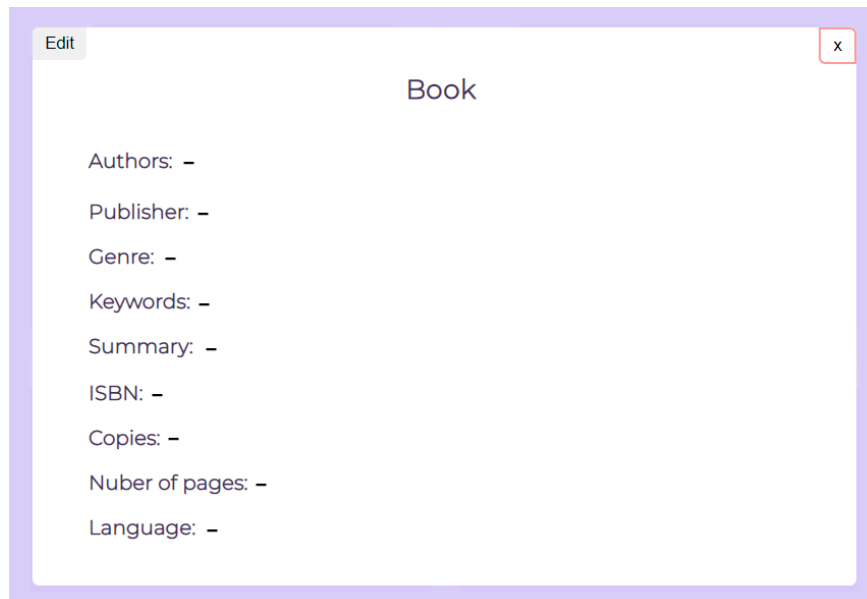
Πατώντας το κουμπί “Add Book” πάνω αριστερά εμφανίζεται η φόρμα συμπλήρωσης του νέου βιβλίου.

The screenshot shows the 'Add Book' form. The title 'Add Book' is centered at the top. The form is a vertical stack of input fields, each with a label: 'Title:', 'Publisher:', 'ISBN:', 'Page number:', 'Summary:', 'Copies:', 'Image:', 'Language:', 'Keywords:', 'Genres:', and 'Writers:'. At the bottom of the form is a purple button labeled 'Submit'.

Εικόνα 22 Προσθήκη βιβλίου

4.6.2 Προβολή και επεξεργασία των πληροφοριών ενός Βιβλίου

Για να μπορέσετε να έχετε πρόσβαση στις πληροφορίες ενός βιβλίου, επιλέξτε το κουμπί “Info”.



Book

Authors: -

Publisher: -

Genre: -

Keywords: -

Summary: -

ISBN: -

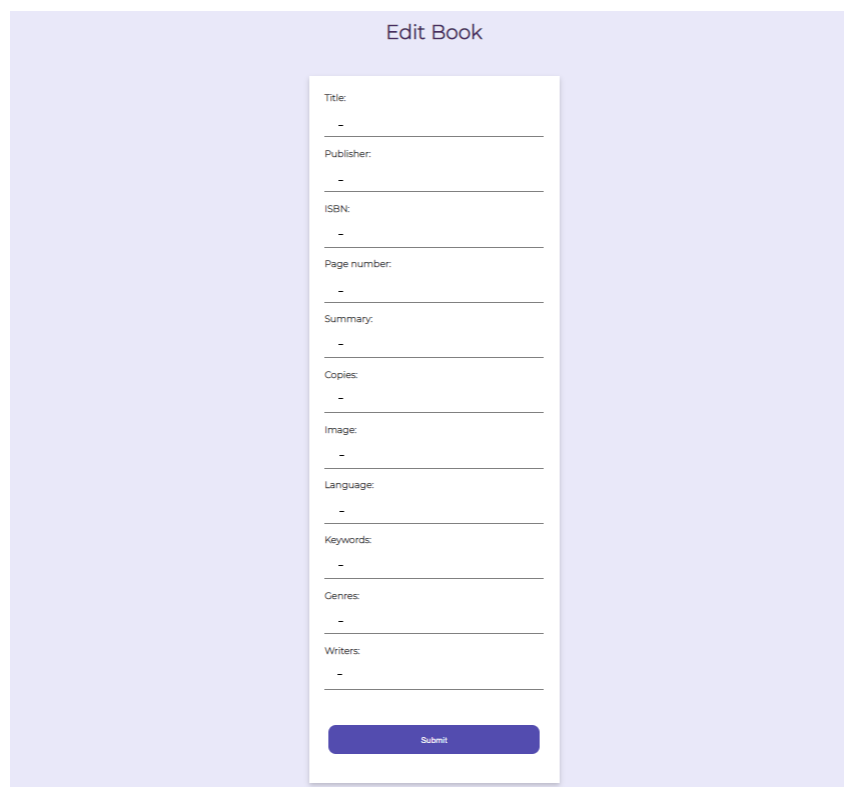
Copies: -

Nuber of pages: -

Language: -

Εικόνα 23 Κάρτα πληροφοριών βιβλίου στον χειριστή

Έπειτα το κουμπί “Edit” σας δίνει την δυνατότητα να επεξεργαστείτε αυτά τα στοιχεία και να τα προσαρμόσετε σε πιο αντιπροσωπευτικά για το βιβλίο.



Edit Book

Title: -

Publisher: -

ISBN: -

Page number: -

Summary: -

Copies: -

Image: -

Language: -

Keywords: -

Genres: -

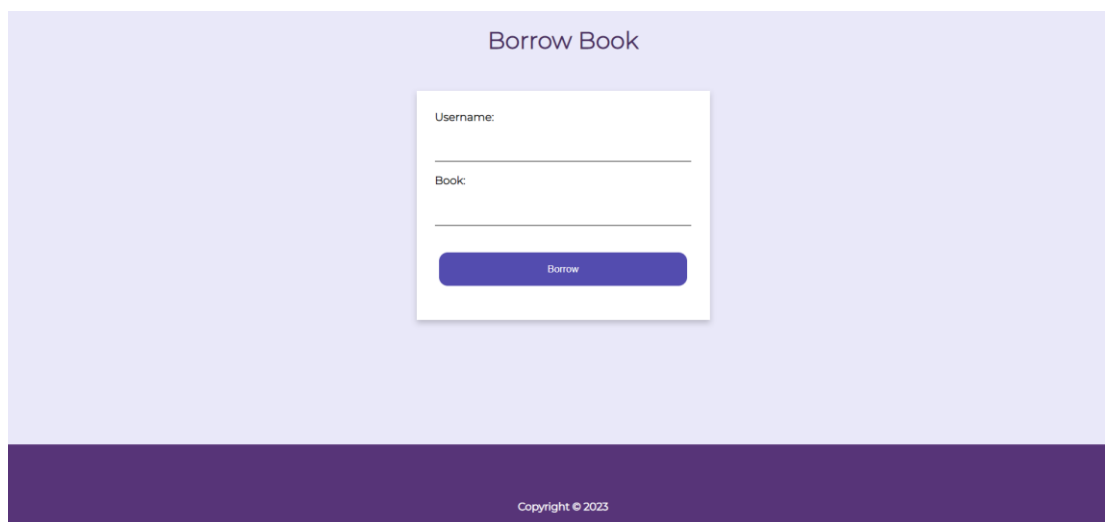
Writers: -

Submit

Εικόνα 24 Φόρμα επεξεργασίας βιβλίου

4.7 Δανεισμός από το σχολείο

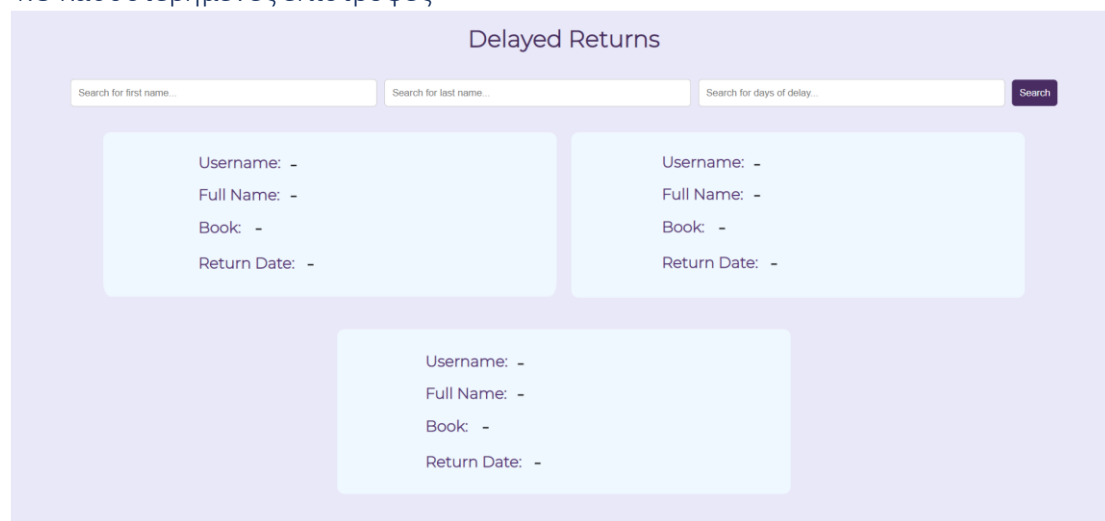
Με την “Borrow Book” ένας χρήστης μπορεί να δανειστεί ένα βιβλίο χωρίς να κάνει πρώτα ηλεκτρονικό αίτημα. Η διαδικασία θα ολοκληρωθεί με επιτυχία εάν ο χρήστης πληρεί και πάλι τις προϋποθέσεις.



The screenshot shows a web interface titled "Borrow Book" on a light purple background. In the center is a white form with two input fields: "Username:" and "Book:". Below these fields is a blue button labeled "Borrow". At the bottom of the page, there is a dark purple footer with the text "Copyright © 2023".

Εικόνα 25 Δανεισμός βιβλίου από το σχολείο

4.8 Καθυστερημένες επιστροφές

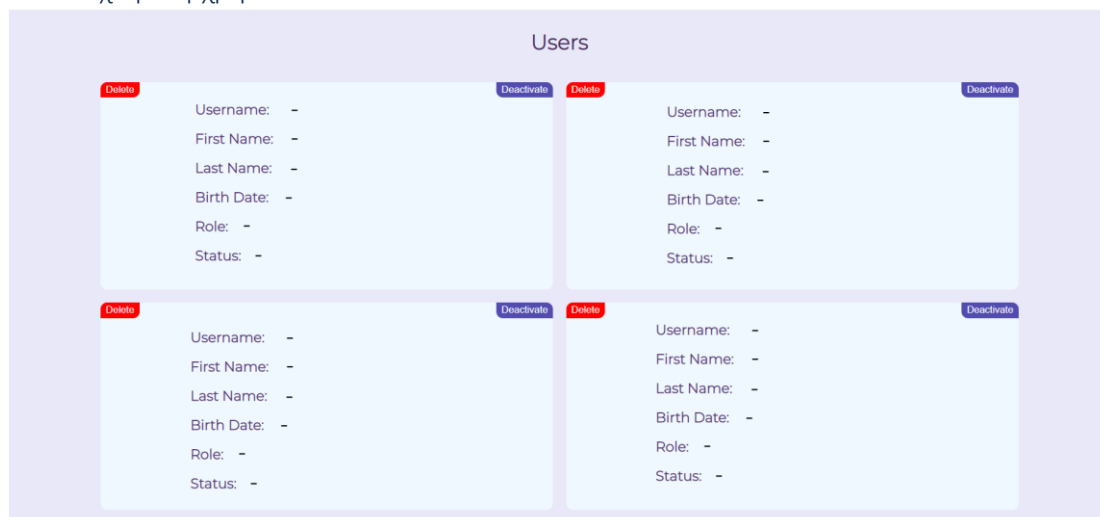


The screenshot shows a web interface titled "Delayed Returns" on a light purple background. At the top, there are three search input fields: "Search for first name...", "Search for last name...", and "Search for days of delay...". To the right of these fields is a dark purple button labeled "Search". Below the search fields are three light blue boxes, each containing a list of fields with a minus sign next to them: "Username: -", "Full Name: -", "Book: -", and "Return Date: -".

Εικόνα 26 Καθυστερημένες επιστροφές

Στην “Delayed Returns” εμφανίζονται οι δανεισμοί που έχουν καθυστερήσει να επιστραφούν πριν το επιτρεπτό χρονικό διάστημα (ένας μήνας). Με την φόρμα αναζήτησης μπορείτε να εντοπίστε εάν κάποιο επίθετο, όνομα και διάστημα καθυστέρησης ανήκει στην συγκεκριμένη λίστα.

4.9 Διαχείριση χρηστών

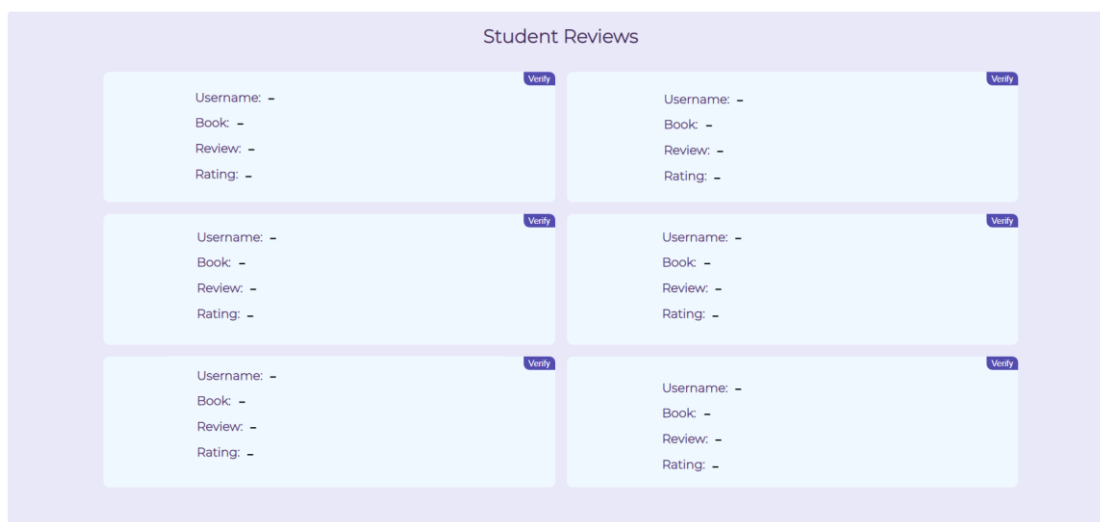


Εικόνα 27 Χρήστες

Στην κάρτα “Users” εμφανίζονται όλοι χρήστες του συγκεκριμένου σχολείου. Το να διαγράψετε και το να απενεργοποιήσετε κάποιον χρήστη είναι εφικτό ενεργοποιώντας το κουμπί “Delete” ή “Deactivate” αντίστοιχα.

4.10 Επιβεβαίωση αξιολογήσεων

Στην κάρτα “Student Reviews” γίνεται η επιβεβαίωση των αξιολογήσεων των μαθητών για τα βιβλία που έχουν διαβάσει.



Εικόνα 28 Αξιολογήσεις μαθητών

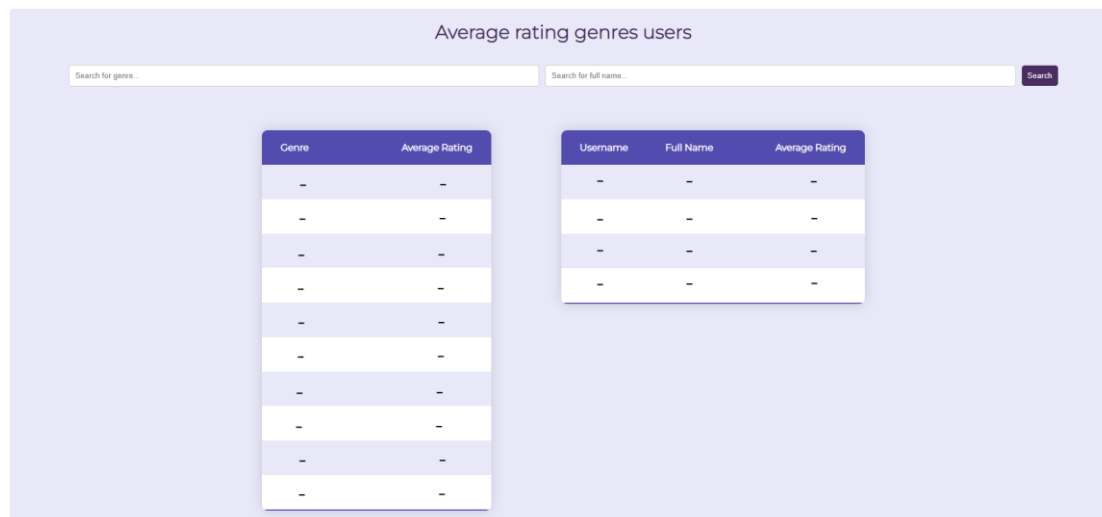
Η μορφή του “Ratings” δίνει την οπτικοποιημένη αξιολόγηση των μαθητών.



Εικόνα 29 Μορφή του Rating

4.11 Μέσος Όρος Αξιολογήσεων ανά δανειζόμενο και κατηγορία

Ως χειριστής ακόμη έχετε την δυνατότητα να γνωρίζεται τον μέσο όρο αξιολογήσεων ανά δανειζόμενο και κατηγορία στην κάρτα “Average rating genres users”. Μπορείτε ακόμη να αναζητήσετε μια κατηγορία , έναν δανειζόμενο ή έναν συνδυασμό τους και να εμφανιστεί ο αντίστοιχος μέσος όρος.



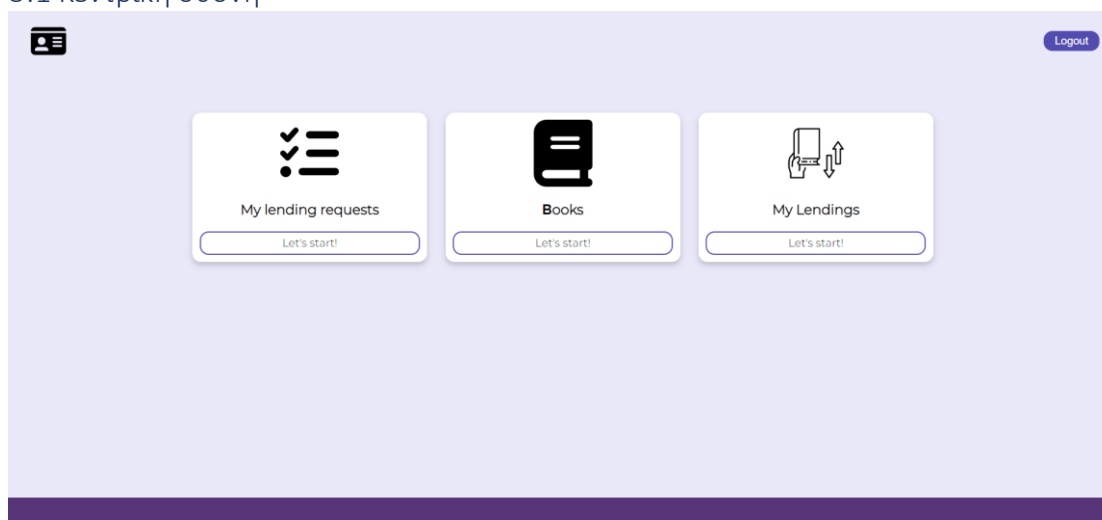
Genre	Average Rating
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

Username	Full Name	Average Rating
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

Εικόνα 30 Μέσος Όρος Αξιολογήσεων ανά δανειζόμενο και κατηγορία

5 Χρήστες

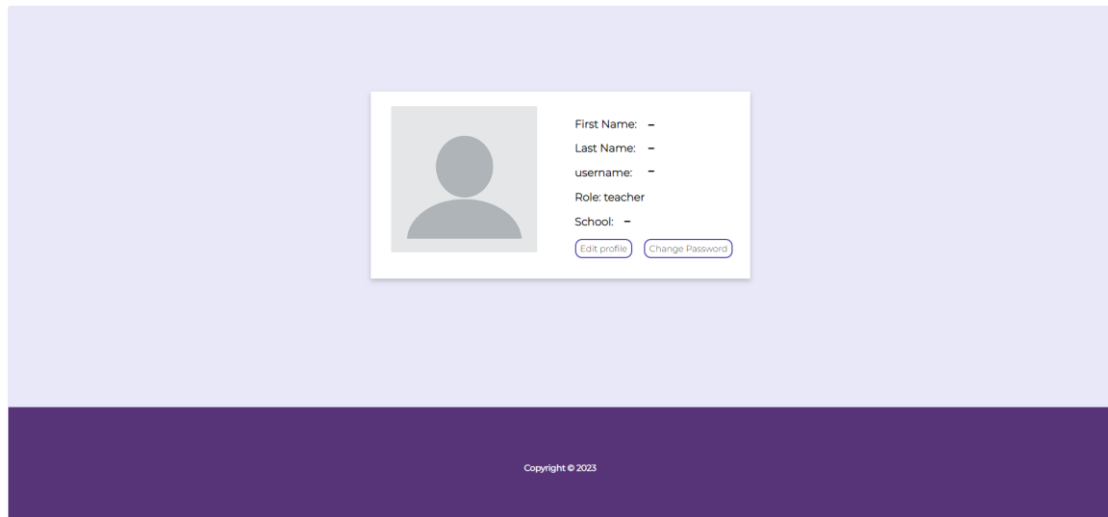
5.1 Κεντρική οθόνη



Εικόνα 31 Κεντρική οθόνη των χρηστών

5.2 Επεξεργασία προφίλ καθηγητή

Στις γενικές λειτουργίες κάθε χρήστη κατατάσσεται το προφίλ. Η διαφορά στους χρήστες-καθηγητές είναι ότι μπορούν να επεξεργάζονται και τα στοιχεία τους με το “Edit profile”.



Εικόνα 32 Προφίλ καθηγητών

Change your personal information

First Name:
-

Last Name:
-

Username:
-

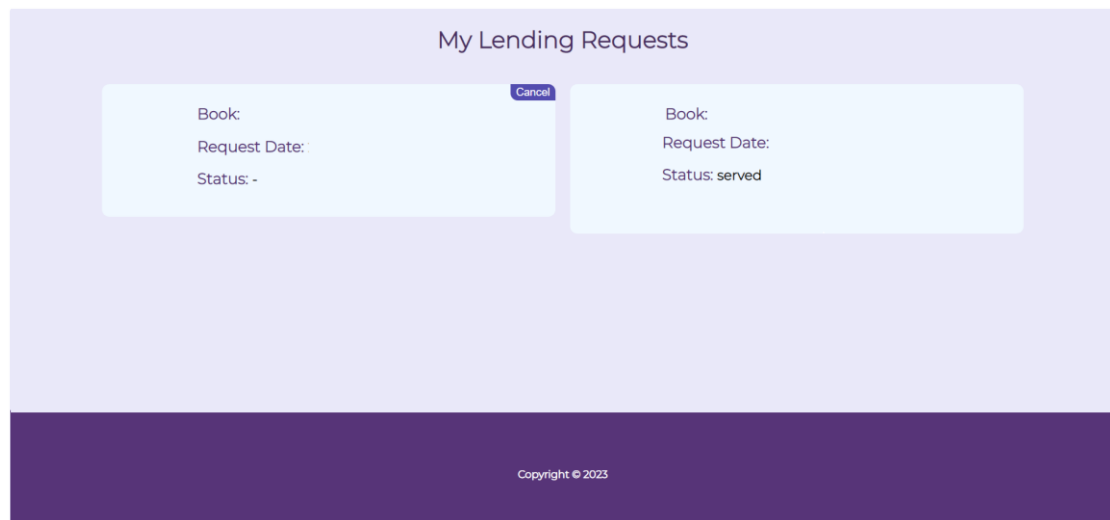
Birth date:
-

Submit

Εικόνα 33 Εξεργασία των στοιχείων του καθηγητή

5.3 Κρατήσεις

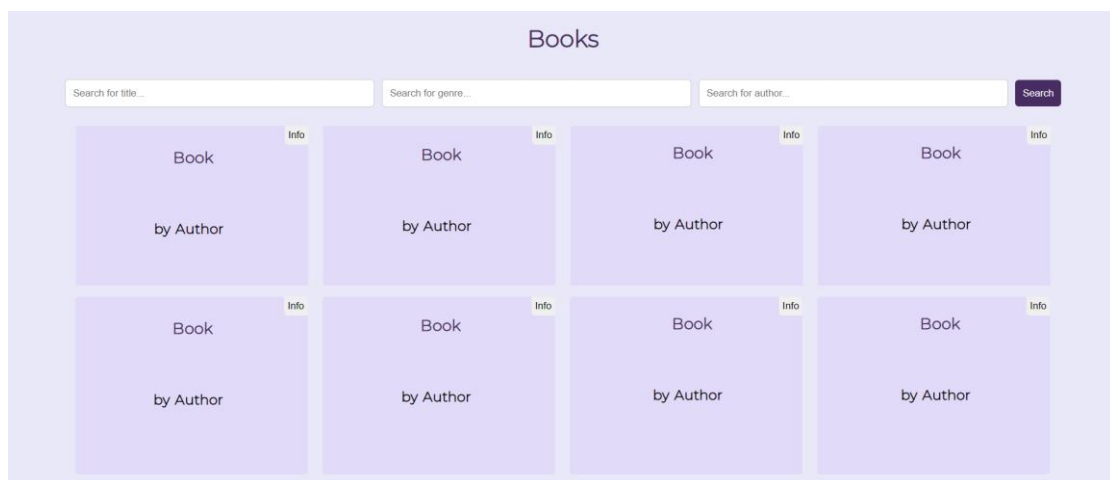
Στην κάρτα “My Lending Requests” μπορείτε εύκολα να δείτε έναν η κράτηση που έχετε κάνει έχει εξυπηρετηθεί με το “Status: served”. Ακόμη μπορείτε να ακυρώσετε μια κράτηση με το “Cancel” εάν βέβαια δεν έχει εξυπηρετηθεί.



Εικόνα 34 Αιτήματα κρατήσεων

5.4 Βιβλία

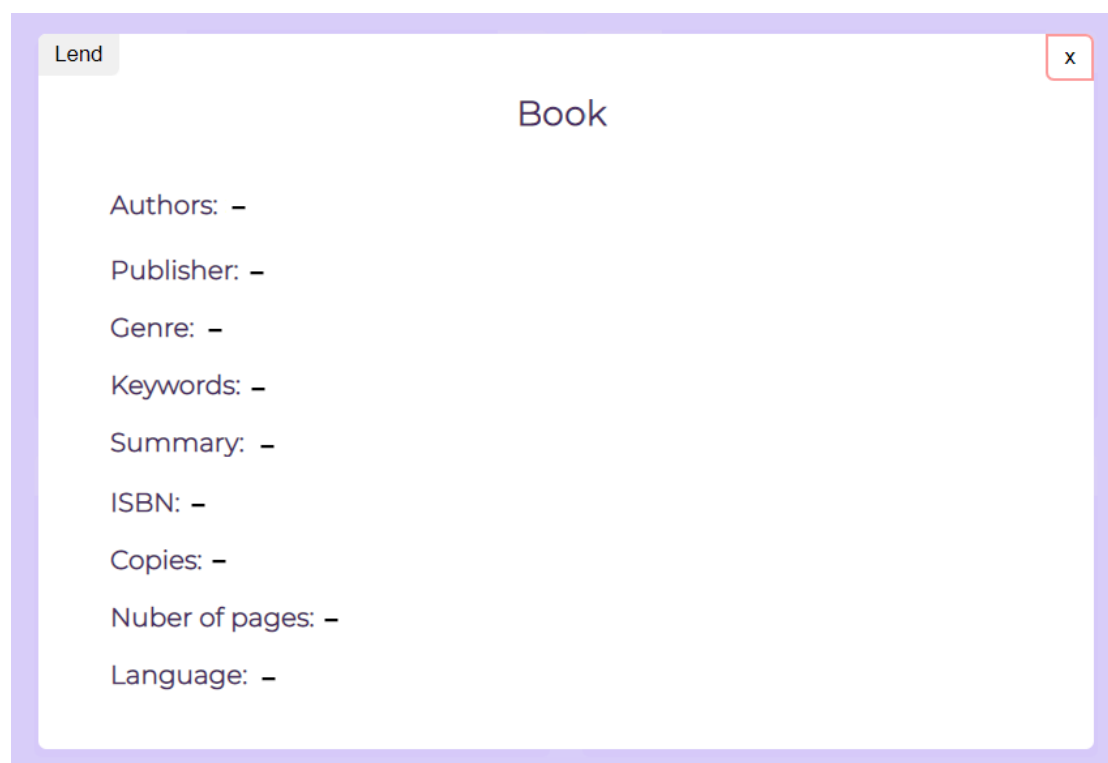
Στην κάρτα “Books” προβάλλονται όλα τα βιβλία που διατίθενται στην βιβλιοθήκη σας.



Εικόνα 35 Βιβλία στους χρήστες

5.4.1 Πληροφορίες Βιβλίου

Με το κουμπί “Info” εμφανίζονται περισσότερες πληροφορίες για το βιβλίο που επιλέξατε.



The image shows a modal window titled "Lend" with a close button (X) in the top right corner. The main heading is "Book". Below it, there are several fields, each followed by a minus sign (-), indicating they are expandable or have more information available:

- Authors: -
- Publisher: -
- Genre: -
- Keywords: -
- Summary: -
- ISBN: -
- Copies: -
- Nuber of pages: -
- Language: -

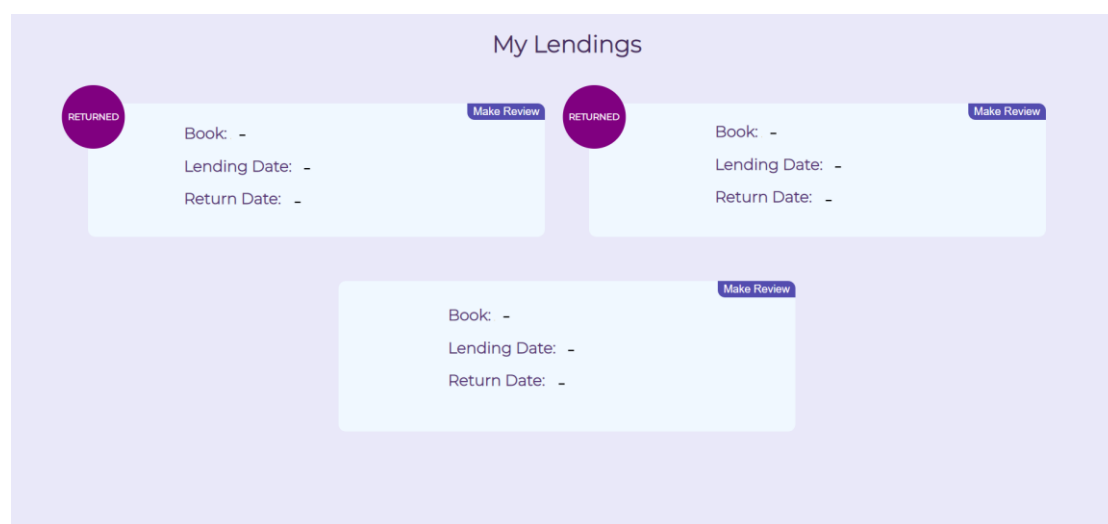
Εικόνα 36 Πληροφορίες των βιβλίων στους χρήστες

5.4.2 Αίτημα κράτησης

Μέσα στην κάρτα με τις πληροφορίες του βιβλίου υπάρχει το κουμπί “Lend” με το οποίο η ηλεκτρονική κράτηση γίνεται επιτεύξιμη.

5.5 Προβολή και αξιολόγηση Δανεισμών

Στην κάρτα “My Lendings” παρουσιάζονται τα βιβλία που έχετε δανειστεί. Επίσης, σας γίνεται αντιληπτό εάν έχετε επιστρέψει ή όχι το βιβλίο με “RETURNED”.

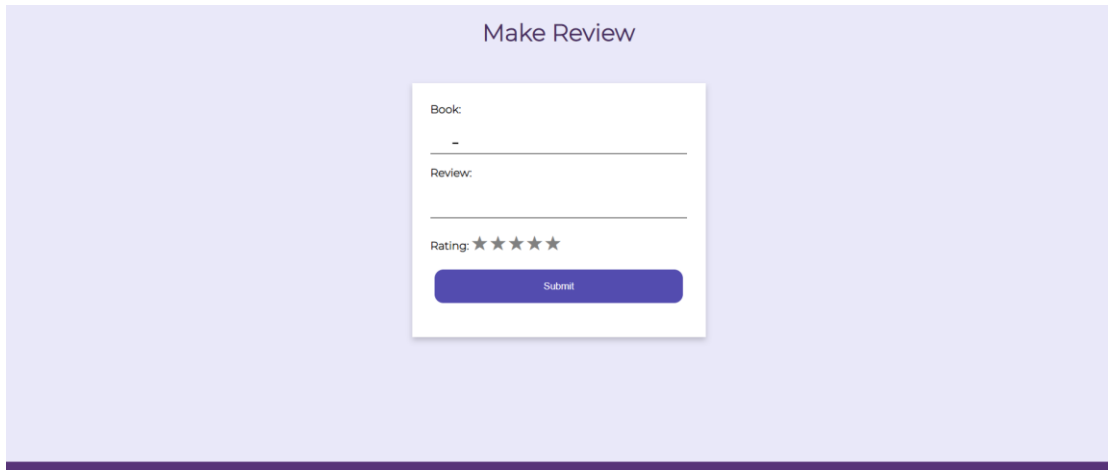


The image shows the "My Lendings" section. It contains three light blue cards, each representing a loan. Each card has a "Make Review" button in the top right corner. The first two cards are marked with a purple circle containing the word "RETURNED" in the top left corner. Each card displays the following information:

- Book: -
- Lending Date: -
- Return Date: -

Εικόνα 37 Κρατήσεις ενός χρήστη

Πατώντας το κουμπί “Make Review” σας δίνεται η δυνατότητα να αξιολογήσετε το βιβλίο που έχετε διαβάσει γράφοντας ένα κείμενο και να επιλέξετε την αντίστοιχη βαθμολογία με αστεράκια.



Εικόνα 38 Αξιολόγηση Βιβλίου

Αναλυτικά βήματα εγκατάστασης της εφαρμογής

Για την εγκατάσταση της εφαρμογής από το Github και την σύνδεσή της με μια τοπική βάση δεδομένων MySQL, ακολουθήστε τα παρακάτω βήματα:

1. Εγκατάσταση της NodeJS

- Επισκεφθείτε τον ιστότοπο της NodeJS (<https://nodejs.org/>) και κατεβάστε την τελευταία έκδοση της NodeJS για το λειτουργικό σας σύστημα.
- Ακολουθήστε τις οδηγίες εγκατάστασης που παρέχονται για το σύστημά σας.

2. Εγκατάσταση της MySQL

- Κατεβάστε και εγκαταστήστε την τελευταία έκδοση της MySQL για το λειτουργικό σας σύστημα από τον επίσημο ιστότοπο της MySQL (<https://www.mysql.com/>).
- Ακολουθήστε τις οδηγίες εγκατάστασης που παρέχονται για το σύστημά σας.
- Σημειώστε το όνομα χρήστη και τον κωδικό πρόσβασης που θα χρησιμοποιήσετε για την πρόσβαση στην βάση δεδομένων.

3. Λήψη και εγκατάσταση της εφαρμογής από το Github

- Επισκεφτείτε την σελίδα του repository της εφαρμογής στο Github.
- Κάντε κλικ στο κουμπί “Code” και αντιγράψτε τον σύνδεσμο του repository.
- Ανοίξτε ένα command prompt και μεταβείτε στο C:// εκτελώντας “cd C://”.
- Εκτελέστε την εντολή “git clone <repository_url>” έτσι ώστε τα αρχεία της εφαρμογής να εγκατασταθούν σε ένα directory με την ονομασία “persefoniDB”.

4. Εγκατάσταση των εξαρτήσεων του έργου

- Στο ίδιο command prompt κάντε “cd persefoniDB/backend” για να μεταβείτε στον φάκελο με τα αρχεία της NodeJS της εφαρμογής.
- Εκτελέστε την εντολή “npm install” για να εγκαταστήσετε όλες τις εξαρτήσεις που απαιτούνται από το έργο. Αυτό θα δημιουργήσει έναν φάκελο “node_modules” με όλα τα πακέτα που χρειάζεται η εφαρμογή.

5. Ρύθμιση της σύνδεσης με την βάση και άλλων configurations

- Ανοίξτε το αρχείο “config.env” στον φάκελο “backend” και τροποποιήστε τον σύμφωνα με τα παρακάτω.
- Τα <db_username> και <db_password> αναφέρονται στο όνομα χρήστη και τον κωδικό πρόσβασης που ορίσατε με την εγκατάσταση της βάσης δεδομένων.
- Τα <db_instancename> και <db_port> αναφέρονται στο όνομα και την θύρα του συγκεκριμένου instance της MySQL που χρησιμοποιείτε (πχ root και 3036).
- Το <db_name> αναφέρεται στο όνομα της βάσης δεδομένων.

6. Εκτέλεση της εφαρμογής

- Στο command prompt εκτελέστε την εντολή “npm start” μέσα στον φάκελο “backend”.
- Ανοίξτε έναν browser της επιλογής σας και μεταβείτε στο “http://localhost:3000”.

Αλλαγή μεταβλητής συστήματος

Για να είναι δυνατή η δημιουργία αντιγράφου ασφαλείας της βάσης δεδομένων (backup) και επαναφορά του συστήματος από αυτό (restore) από τον κεντρικό διαχειριστή όλου του συστήματος, θα πρέπει να ακολουθήσετε την παρακάτω διαδικασία, που θα επιτρέψει στην MySQL να έχει πρόσβαση στον φάκελο με τα αρχεία της εφαρμογής:

- Ανοίξτε τον File Explorer και στην μπάρα λειτουργιών στο πάνω μέρος της οθόνης επιλέξτε View -> Hidden Items, ώστε να είναι πλέον ορατά και τα κρυμμένα αρχεία.
- Επιλέξτε Program Data -> MySQL -> MySQL Server 8.0 και ανοίξτε το αρχείο my.ini με δικαιώματα administrator σε κάποιον editor της επιλογής σας.
- Βρείτε στο αρχείο αυτό την μεταβλητή συστήματος “secure_file_priv” και αλλάξτε την τιμή της σε κενό, ως εξής: secure_file_priv: “”.
- Στην συνέχεια επανεκκινήστε την MySQL, ανοίγοντας το services.msc και βρίσκοντας την επιλογή MySQL -> Restart.

Δημιουργία της Βάσης

Τέλος, για να δημιουργήσετε την τοπική βάση δεδομένων σας και να την γεμίσετε με δεδομένα μπορείτε να εκτελέσετε τα sql scripts που βρίσκονται στον φάκελο “DML+DDL scripts” (πρώτα το create_database.sql και μετά το legitdummydata.sql), αλλάζοντας το <db_name> στο όνομα που έχετε δώσει στην βάση σας.

Σύνδεσμος git repo

<https://github.com/vassilikim/persefoniDB>