#!/bin/bash

DB\_USER="root"

DB\_PASSWORD=""

DB\_NAME="os\_final"

MYSQL="/opt/lampp/bin/mysql"

function create\_user(){

read -p "Enter the First name: " fname

read -p "Enter the Last name: " lname

read -p "Enter the Email: " email

read -p "Enter the password: " password

echo

read -p "Confirm your password: " password\_confirm

echo

if [ "$password" != "$password\_confirm" ]; then

echo "Passwords do not match."

return

fi

read -p "Enter the Role ('Student', 'Instructor'): " role

$MYSQL -u$DB\_USER $DB\_NAME <<EOF

INSERT INTO users (fname, lname, email, password, role) VALUES ('$fname', '$lname', '$email', '$password', '$role');

EOF

echo "$email added successfully!"

}

function login\_user(){

read -p "Enter your Email: " email

read -p "Enter your password: " password

echo

role=$($MYSQL -u$DB\_USER $DB\_NAME -se "SELECT role FROM users WHERE email='$email' AND password='$password';")

if [ -z "$role" ]; then

echo "Invalid email or password."

else

echo "Login successful!"

if [ "$role" == "Student" ]; then

echo "Welcome, $email (Student)"

student\_menu "$email"

elif [ "$role" == "Instructor" ]; then

echo "Welcome, $email (Instructor)"

instructor\_menu "$email"

else

echo "Unknown role: $role"

fi

fi

}

function view\_profile(){

email="$1"

profile=$($MYSQL -u$DB\_USER $DB\_NAME -se "SELECT CONCAT(fname, ' ', lname) AS FullName, email AS Email, role AS Role FROM users WHERE email='$email';")

if [ -z "$profile" ]; then

echo "User not found."

else

echo "Profile Information:"

printf "%-20s %-30s %-10s\n" "Full Name" "Email" "Role"

echo "--------------------------------------------------"

echo "$profile"

fi

}

function view\_available\_courses(){

echo "Available Courses:"

courses=$($MYSQL -u$DB\_USER $DB\_NAME -se "SELECT course\_id, course\_name, description FROM courses;")

if [ -z "$courses" ]; then

echo "No courses available."

else

printf "\033[1m%-10s | %-30s | %-50s\033[0m\n" "Course ID" "Course Name" "Description"

echo "$courses" | while IFS=$'\t' read -r course\_id course\_name description; do

printf "%-10s | %-30s | %-50s\n" "$course\_id" "$course\_name" "$description"

done

fi

}

function enroll\_in\_courses(){

email="$1"

view\_available\_courses

read -p "Enter the Course ID to enroll: " course\_id

user\_id=$($MYSQL -u$DB\_USER $DB\_NAME -se "SELECT user\_id FROM users WHERE email='$email';")

$MYSQL -u$DB\_USER $DB\_NAME <<EOF

INSERT INTO enrollments (user\_id, course\_id) VALUES ('$user\_id', '$course\_id');

EOF

echo "Enrolled in course ID $course\_id successfully!"

}

function view\_all\_course\_materials(){

echo "All available course materials..."

combined\_data=$($MYSQL -u$DB\_USER $DB\_NAME -se "

SELECT

c.course\_name,

m.module\_name,

l.lesson\_name,

l.description

FROM

courses c

LEFT JOIN modules m ON c.course\_id = m.course\_id

LEFT JOIN lessons l ON m.module\_id = l.module\_id

ORDER BY

c.course\_name, m.module\_name, l.lesson\_name;")

if [ -z "$combined\_data" ]; then

echo "No course materials available."

return

fi

printf "\033[1m%-30s | %-30s | %-30s | %-50s\033[0m\n" "Course Name" "Module Name" "Lesson Name" "Description"

printf "%s\n"

while IFS=$'\t' read -r course\_name module\_name lesson\_name description; do

printf "%-30s | %-30s | %-30s | %-50s\n" "$course\_name" "$module\_name" "$lesson\_name" "$description"

done <<< "$combined\_data"

}

function view\_enrolled\_courses\_assignments(){

email="$1"

echo "Assignments for Enrolled Courses:"

user\_id=$($MYSQL -u$DB\_USER $DB\_NAME -se "SELECT user\_id FROM users WHERE email='$email';")

assignments=$($MYSQL -u$DB\_USER $DB\_NAME -se "

SELECT e.course\_id, c.course\_name, a.assignment\_id, a.assignment\_name, a.description, a.deadline

FROM enrollments e

JOIN courses c ON e.course\_id = c.course\_id

JOIN modules m ON c.course\_id = m.course\_id

JOIN lessons l ON m.module\_id = l.module\_id

JOIN assignments a ON l.lesson\_id = a.lesson\_id

WHERE e.user\_id='$user\_id'

ORDER BY c.course\_name, a.assignment\_id;")

if [ -z "$assignments" ]; then

echo "No assignments available for enrolled courses."

else

printf "\033[1m%-10s | %-30s | %-15s | %-30s | %-50s | %-20s\033[0m\n" "Course ID" "Course Name" "Assignment ID" "Assignment Name" "Description" "Deadline"

echo "$assignments" | while IFS=$'\t' read -r course\_id course\_name assignment\_id assignment\_name description deadline; do

printf "%-10s | %-30s | %-15s | %-30s | %-50s | %-20s\n" "$course\_id" "$course\_name" "$assignment\_id" "$assignment\_name" "$description" "$deadline"

done

fi

}

function submit\_assignments(){

email="$1"

view\_enrolled\_courses\_assignments "$email"

read -p "Enter the Assignment ID to submit: " assignment\_id

read -p "Enter your submission text: " submission\_text

user\_id=$($MYSQL -u$DB\_USER $DB\_NAME -se "SELECT user\_id FROM users WHERE email='$email';")

$MYSQL -u$DB\_USER $DB\_NAME <<EOF

INSERT INTO submissions (user\_id, assignment\_id, submission\_text) VALUES ('$user\_id', '$assignment\_id', '$submission\_text');

EOF

echo "Assignment submitted successfully!"

}

function view\_grades(){

email="$1"

user\_id=$($MYSQL -u$DB\_USER $DB\_NAME -se "SELECT user\_id FROM users WHERE email='$email';")

grades=$($MYSQL -u$DB\_USER $DB\_NAME -se "SELECT g.assignment\_id, a.assignment\_name, g.grade FROM grades g JOIN assignments a ON g.assignment\_id = a.assignment\_id WHERE g.user\_id='$user\_id';")

if [ -z "$grades" ]; then

echo "No grades available."

else

echo "Your Grades:"

printf "%-15s %-20s %-10s\n" "Assignment-ID" "Assignment-Name" "Grade"

echo "--------------------------------------------------"

echo "$grades" | while IFS=$'\t' read -r assignment\_id assignment\_name grade; do

printf "%-15s %-20s %-10s\n" "$assignment\_id" "$assignment\_name" "$grade"

done

echo "--------------------------------------------------"

fi

}

function student\_menu(){

email="$1"

while true; do

echo "=============================="

echo " Student Menu "

echo "=============================="

echo "1. View available courses"

echo "2. Enroll in courses"

echo "3. View course materials"

echo "4. View assignments"

echo "5. Submit assignments"

echo "6. View grades"

echo "7. View Profile"

echo "8. Logout"

echo "=============================="

read -p "Enter your choice: " choice

case $choice in

1) view\_available\_courses ;;

2) enroll\_in\_courses "$email" ;;

3) view\_all\_course\_materials ;;

4) view\_enrolled\_courses\_assignments "$email" ;;

5) submit\_assignments "$email" ;;

6) view\_grades "$email" ;;

7) view\_profile "$email" ;;

8) break ;;

\*) echo "Invalid choice. Please enter a valid option." ;;

esac

done

}

function instructor\_menu(){

email="$1"

while true; do

echo "=============================="

echo " Instructor Menu "

echo "=============================="

echo "1. Create courses"

echo "2. Add modules, lessons, and assignments to courses"

echo "3. Grade assignments"

echo "4. Logout"

echo "=============================="

read -p "Enter your choice: " choice

case $choice in

1) create\_courses "$email" ;;

2) add\_modules\_lessons\_assignments ;;

3) grade\_assignments ;;

4) break ;;

\*) echo "Invalid choice. Please enter a valid option." ;;

esac

done

}

function create\_courses(){

read -p "Enter the Course name: " course\_name

read -p "Enter the Course description: " description

read -p "Enter the Start date (YYYY-MM-DD): " start\_date

read -p "Enter the End date (YYYY-MM-DD): " end\_date

instructor\_email="$1"

instructor\_id=$($MYSQL -u$DB\_USER $DB\_NAME -se "SELECT user\_id FROM users WHERE email='$instructor\_email';")

$MYSQL -u$DB\_USER $DB\_NAME <<EOF

INSERT INTO courses (course\_name, description, start\_date, end\_date, instructor\_id) VALUES ('$course\_name', '$description', '$start\_date', '$end\_date', '$instructor\_id');

EOF

echo "Course '$course\_name' created successfully!"

}

function add\_modules\_lessons\_assignments(){

read -p "Enter the Course ID to add module: " course\_id

read -p "Enter the Module name: " module\_name

read -p "Enter the Module description: " module\_description

$MYSQL -u$DB\_USER $DB\_NAME <<EOF

INSERT INTO modules (module\_name, description, course\_id) VALUES ('$module\_name', '$module\_description', '$course\_id');

EOF

echo "Module '$module\_name' added successfully!"

module\_id=$($MYSQL -u$DB\_USER $DB\_NAME -se "SELECT module\_id FROM modules WHERE module\_name='$module\_name' AND course\_id='$course\_id';")

while true; do

echo "=============================="

echo " Add to Module Menu "

echo "=============================="

echo "1. Add Lesson"

echo "2. Add Assignment"

echo "3. Finish"

echo "=============================="

read -p "Enter your choice: " choice

case $choice in

1)

read -p "Enter the Lesson name: " lesson\_name

read -p "Enter the Lesson description: " lesson\_description

read -p "Enter the Video URL: " video\_url

$MYSQL -u$DB\_USER $DB\_NAME <<EOF

INSERT INTO lessons (lesson\_name, description, video\_url, module\_id) VALUES ('$lesson\_name', '$lesson\_description', '$video\_url', '$module\_id');

EOF

echo "Lesson '$lesson\_name' added successfully!"

;;

2)

read -p "Enter the Assignment name: " assignment\_name

read -p "Enter the Assignment description: " assignment\_description

read -p "Enter the Deadline (YYYY-MM-DD HH:MM:SS): " deadline

lesson\_id=$($MYSQL -u$DB\_USER $DB\_NAME -se "SELECT lesson\_id FROM lessons WHERE module\_id='$module\_id' AND lesson\_name='$lesson\_name';")

$MYSQL -u$DB\_USER $DB\_NAME <<EOF

INSERT INTO assignments (assignment\_name, description, deadline, lesson\_id) VALUES ('$assignment\_name', '$assignment\_description', '$deadline', '$lesson\_id');

EOF

echo "Assignment '$assignment\_name' added successfully!"

;;

3) break ;;

\*) echo "Invalid choice. Please enter a valid option." ;;

esac

done

}

function grade\_assignments(){

read -p "Enter the Course ID: " course\_id

assignments=$($MYSQL -u$DB\_USER $DB\_NAME -se "

SELECT a.assignment\_id, a.assignment\_name, s.user\_id, u.email, s.submission\_text

FROM assignments a

JOIN submissions s ON a.assignment\_id = s.assignment\_id

JOIN users u ON s.user\_id = u.user\_id

WHERE a.course\_id='$course\_id';")

if [ -z "$assignments" ]; then

echo "No assignments to grade for this course."

else

echo "Assignments to grade:"

printf "%-15s %-20s %-20s %-30s %-50s\n" "Assignment ID" "Assignment Name" "User ID" "User Email" "Submission Text"

echo "-------------------------------------------------------------------------------------------------------------"

echo "$assignments" | while IFS=$'\t' read -r assignment\_id assignment\_name user\_id user\_email submission\_text; do

printf "%-15s %-20s %-20s %-30s %-50s\n" "$assignment\_id" "$assignment\_name" "$user\_id" "$user\_email" "$submission\_text"

done

read -p "Enter the Assignment ID to grade: " assignment\_id

read -p "Enter the User ID to grade: " user\_id

read -p "Enter the grade: " grade

$MYSQL -u$DB\_USER $DB\_NAME <<EOF

INSERT INTO grades (assignment\_id, user\_id, grade) VALUES ('$assignment\_id', '$user\_id', '$grade');

EOF

echo "Grade assigned successfully!"

fi

}

function main\_menu(){

echo "=============================="

echo " Main Menu "

echo "=============================="

echo "1. Create User"

echo "2. Login"

echo "3. Exit"

echo "=============================="

read -p "Enter your choice: " choice

case $choice in

1) create\_user ;;

2) login\_user ;;

3) exit ;;

\*) echo "Invalid choice. Please enter a valid option." ;;

esac

}

while true; do

main\_menu

done