import com.mysql.cj.jdbc.CallableStatement;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.SQLException;

import java.sql.Types;

import java.util.logging.Level;

import java.util.logging.Logger;

import javafx.application.Application;

import javafx.geometry.HPos;

import javafx.geometry.Insets;

import javafx.geometry.Pos;

import javafx.scene.Scene;

import javafx.scene.control.Alert;

import javafx.scene.control.Button;

import javafx.scene.control.Label;

import javafx.scene.control.TextField;

import javafx.scene.layout.GridPane;

import javafx.stage.Stage;

import javafx.stage.Window;

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public class App extends Application{

private PreparedStatement preparedStatement;

private CallableStatement callableStatement1;

private void initializeDB(GridPane gridpane, TextField nameText, TextField numberText, TextField emailText) throws SQLException {

if(numberText.getText().isEmpty()) {

showAlert(Alert.AlertType.ERROR, gridpane.getScene().getWindow(),

"Message", "Please ensure all fields are filled in");

return;

}

if(nameText.getText().isEmpty()) {

showAlert(Alert.AlertType.ERROR, gridpane.getScene().getWindow(),

"Message", "Please ensure all fields are filled in");

return;

}

if(emailText.getText().isEmpty()) {

showAlert(Alert.AlertType.ERROR, gridpane.getScene().getWindow(),

"Message", "Please ensure all fields are filled in");

return;

}

showAlert(Alert.AlertType.CONFIRMATION, gridpane.getScene().getWindow(),

"Message", "Congratulations. You have successfully registered");

String uNumber = numberText.getText().toString();

callableStatement1.setString(2, uNumber);

callableStatement1.registerOutParameter(1, Types.INTEGER);

callableStatement1.execute();

if (callableStatement1.getInt(1) >= 1){

showAlert(Alert.AlertType.ERROR, gridpane.getScene().getWindow(),

"Message", "The number you entered already exists,"

+ "Please enter another number");

}

preparedStatement.setString(1, numberText.getText());

preparedStatement.setString(2, nameText.getText());

preparedStatement.setString(3, emailText.getText());

int rset = preparedStatement.executeUpdate();

showAlert(Alert.AlertType.CONFIRMATION, gridpane.getScene().getWindow(),

"Message", "Congratulations. You have successfully registered");

}

private void showAlert(Alert.AlertType alertType, Window owner, String title, String message) {

Alert alert = new Alert(alertType);

alert.setTitle(title);

alert.setHeaderText(null);

alert.setContentText(message);

alert.initOwner(owner);

alert.show();

}

private void UIControls(GridPane gridpane){

Label introLabel = new Label("Please enter your details");

gridpane.add(introLabel, 0,0,2,1);

GridPane.setHalignment(introLabel, HPos.CENTER);

Label numberLabel = new Label("Number");

gridpane.add(numberLabel, 0,1);

TextField numberText = new TextField();

gridpane.add(numberText, 1,1);

Label nameLabel = new Label("Name");

gridpane.add(nameLabel, 0, 2);

TextField nameText = new TextField();

gridpane.add(nameText, 1, 2);

Label emailLabel = new Label("Email");

gridpane.add(emailLabel, 0, 3);

TextField emailText = new TextField();

gridpane.add(emailText, 1, 3);

Button registerButton = new Button("Register");

registerButton.setDefaultButton(true);

gridpane.add(registerButton, 0, 4, 2, 1);

GridPane.setHalignment(registerButton, HPos.CENTER);

registerButton.setOnAction(e -> {

try {

initializeDB(gridpane, nameText,numberText,emailText);

} catch (SQLException ex) {

Logger.getLogger(App.class.getName()).log(Level.SEVERE, null, ex);

}

});

}

private void DBconnect() throws SQLException{

Connection connection = DriverManager.getConnection("jdbc:mysql://localhost:3306/register?zeroDateTimeBehavior=CONVERT\_TO\_NULL [root on Default schema]");

System.out.println("Database connected");

callableStatement1 = (CallableStatement) connection.prepareCall("{? = call notUniqueNumber(?)}");

preparedStatement = connection.prepareStatement("INSERT INTO person (unique\_number, name, email) VALUES((?,?,?)");

}

@Override

public void start(Stage stage) throws Exception {

GridPane gridpane = new GridPane();

gridpane.setMinSize(400,150);

gridpane.setPadding(new Insets(20,20,20,20));

gridpane.setVgap(5);

gridpane.setHgap(5);

gridpane.setAlignment(Pos.CENTER);

DBconnect();

UIControls(gridpane);

stage.setTitle("Independence Day Registration");

Scene scene = new Scene(gridpane, 500, 300);

stage.setScene(scene);

stage.show();

}

public static void main(String[] args) {

launch(args);

}

}