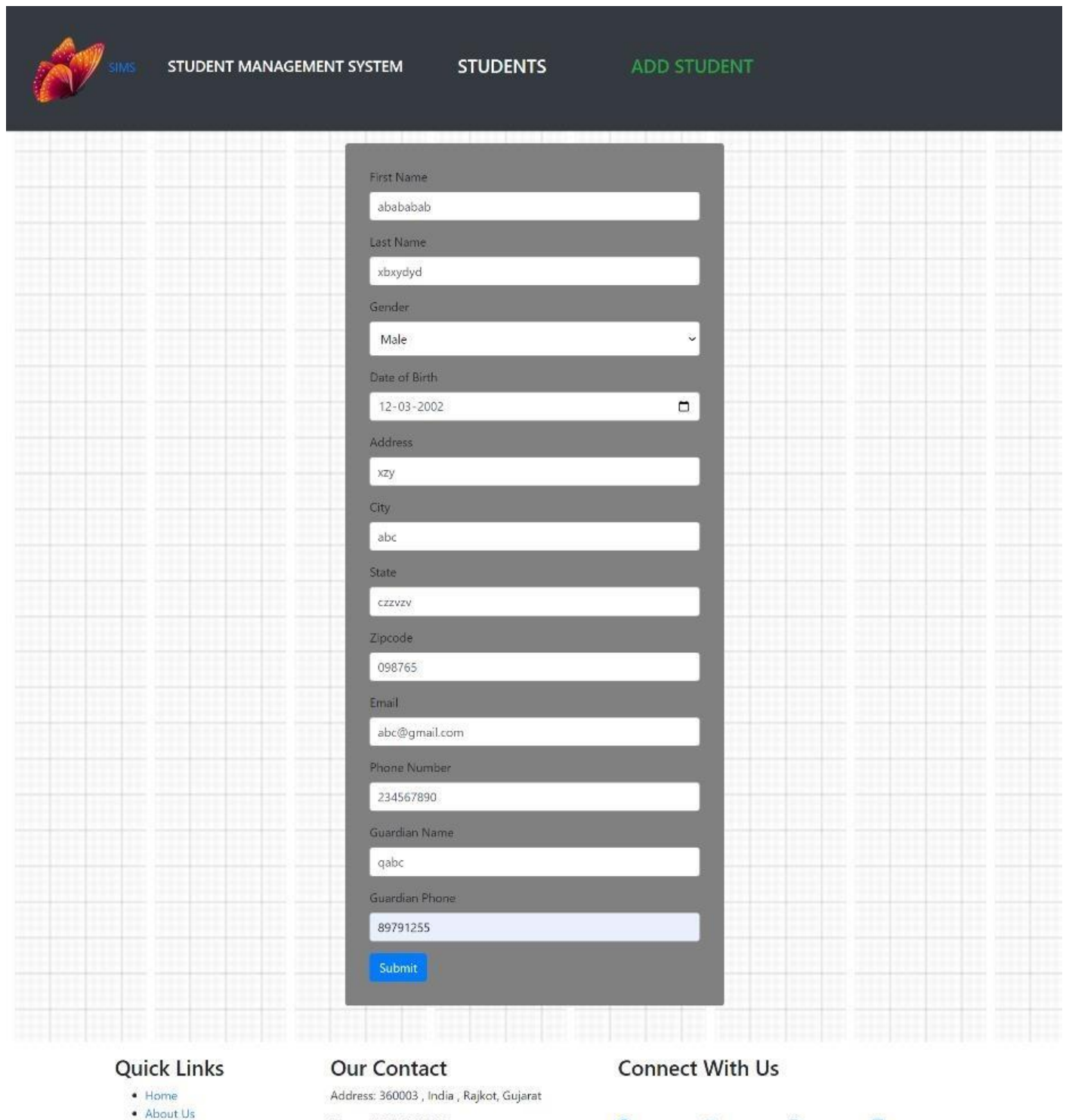


## Lab#14(a)

### Lab#14(a). Implement Insert Operation to add new record of student in Student Information System.

#### Final Outcome:



The screenshot displays the 'ADD STUDENT' form within the SIMS (Student Information Management System) web application. The form is centered on a grid background and contains the following fields:

- First Name: abababab
- Last Name: xbxydyd
- Gender: Male (dropdown menu)
- Date of Birth: 12-03-2002 (calendar icon)
- Address: xzy
- City: abc
- State: czzvzv
- Zipcode: 098765
- Email: abc@gmail.com
- Phone Number: 234567890
- Guardian Name: qabc
- Guardian Phone: 89791255

A blue 'Submit' button is located at the bottom of the form. The top navigation bar includes the SIMS logo, 'STUDENT MANAGEMENT SYSTEM', 'STUDENTS', and 'ADD STUDENT' (highlighted in green). The footer contains 'Quick Links' (Home, About Us), 'Our Contact' (Address: 360003, India, Rajkot, Gujarat), and 'Connect With Us' (social media icons).

## Lab#14(a)

### Code Snippet:

```
// Route handler to create a new student
exports.createStudent = (req, res) => {
  // Extract student data from req.body and insert it into the SQLite database
  const {
    first_name,
    last_name,
    gender,
    date_of_birth,
    address,
    city,
    state,
    zipcode,
    email,
    phone_number,
    guardian_name,
    guardian_phone,
  } = req.body;

  const stmt = db.prepare(
    "INSERT INTO students (first_name, last_name, gender, date_of_birth, address, city, state, zipcode, email, phone_number, guardian_name, guardian_phone) VALUES (?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?)"
  );

  stmt.run(
    [
      first_name,
      last_name,
      gender,
      date_of_birth,
      address,
      city,
      state,
      zipcode,
      email,
      phone_number,
      guardian_name,
      guardian_phone,
    ],
    (err) => {
      if (err) {
        console.error(err);
        res.status(500).send("Internal Server Error");
      }
    }
  );
}
```

---

```
    return;
  }

  res.redirect("/sims/all");
}
);

stmt.finalize();
};

//delete student from database
exports.deleteStudent = (req, res) => {
  const id = req.params.id;

  const stmt = db.prepare("DELETE FROM students WHERE id = ?");

  stmt.run([id], (err) => {
    if (err) {
      console.error(err);
      res.status(500).send("Internal Server Error");
      return;
    }

    res.redirect("/sims/all");
  });

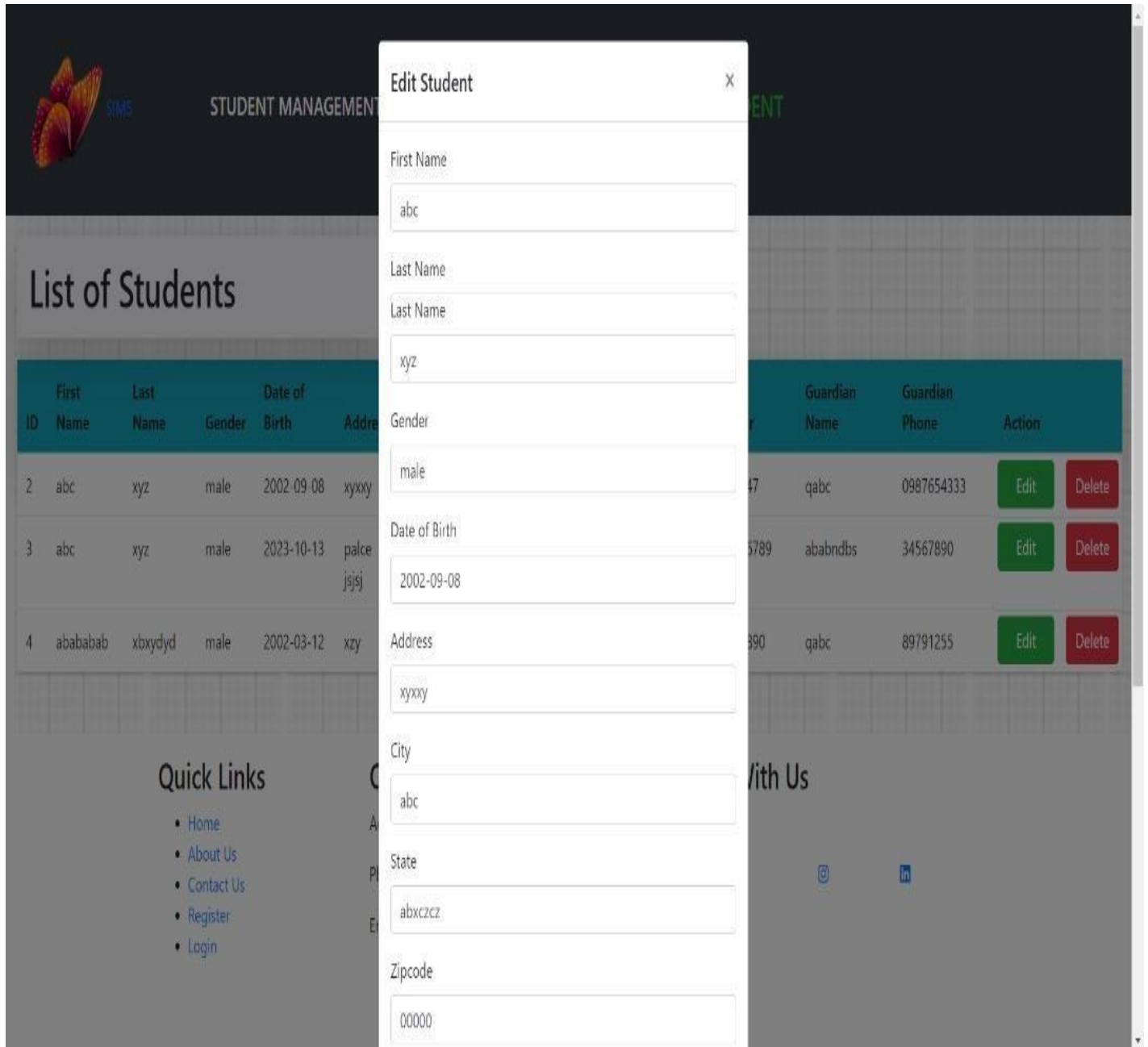
  stmt.finalize();
};
```

### Lab#14(a)

## Lab#14(b)

### Lab#14(b). Implement Update Operation to modify any details of student in Student Information System.

#### Final Outcome:



The screenshot displays a web application for student management. A modal window titled "Edit Student" is open, allowing for the modification of a student's details. The background shows a "List of Students" table with columns for ID, First Name, Last Name, Gender, Date of Birth, and Address. A "Quick Links" section is visible at the bottom left.

**Edit Student Modal Form:**

- First Name:
- Last Name:
- Gender:
- Date of Birth:
- Address:
- City:
- State:
- Zipcode:

**List of Students Table:**

ID	First Name	Last Name	Gender	Date of Birth	Address
2	abc	xyz	male	2002-09-08	xyxy
3	abc	xyz	male	2023-10-13	palce jsjsj
4	abababab	xbxydyd	male	2002-03-12	xyz

**Quick Links:**

- Home
- About Us
- Contact Us
- Register
- Login

## Lab#14(b)

### Code Snippet:

```
// Route handler to update a student by ID
exports.updateStudent = (req, res) => {
  const studentId = req.params.id;

  const {
    first_name,
    last_name,
    gender,
    date_of_birth,
    address,
    city,
    state,
    zipcode,
    email,
    phone_number,
    guardian_name,
    guardian_phone,
  } = req.body;

  // Begin a transaction
  db.run("BEGIN TRANSACTION", function (beginErr) {
    if (beginErr) {
      console.error(beginErr);
      res.status(500).send("Internal Server Error");
      return;
    }

    const stmt = db.prepare(
      "UPDATE students SET first_name = ?, last_name = ?, gender = ?, date_of_birth = ?, address = ?, city
      = ?, state = ?, zipcode = ?, email = ?, phone_number = ?, guardian_name = ?, guardian_phone = ? WHERE
      id = ?"
    );

    stmt.run(
      first_name,
      last_name,
      gender,
      date_of_birth,
      address,
      city,
      state,
      zipcode,
      email,
      phone_number,
      guardian_name,
```


guardian\_phone,

## Lab#14(b)

```
studentId,
(err) => {
  if (err) {
    console.error(err);
    // Rollback the transaction in case of an error
    db.run("ROLLBACK", (rollbackErr) => {
      if (rollbackErr) {
        console.error(rollbackErr);
      }
      res.status(500).send("Internal Server Error");
    });
  } else {
    // Commit the transaction
    db.run("COMMIT", (commitErr) => {
      if (commitErr) {
        console.error(commitErr);
        res.status(500).send("Internal Server Error");
      } else {
        console.log("Student updated successfully.");
        res.redirect("/sims/all");
      }
    });
  }
}
};

stmt.finalize();
});
};
```

## Lab#14(c)



**STUDENT MANAGEMENT SYSTEM**

**STUDENTS**

**ADD STUDENT**

### List of Students

ID	First Name	Last Name	Gender	Date of Birth	Address	City	State	Zipcode	Email	Phone Number	Guardian Name	Guardian Phone	Action
2	abc	xyz	male	2002-09-08	xyxy	abc	abxczcz	00000	abc@gmail.com	09876547	qabc	0987654333	<a href="#">Edit</a> <a href="#">Delete</a>
3	abc	xyz	male	2023-10-13	palce jsjsj	city 26262	udsdudu	09083	abc@gmail.com	7890456789	ababndbs	34567890	<a href="#">Edit</a> <a href="#">Delete</a>

#### Quick Links

- [Home](#)
- [About Us](#)
- [Contact Us](#)
- [Register](#)
- [Login](#)





#### Our Contact

Address: 360003 , India , Rajkot, Gujarat

Phone: (123) 456-7890

Email: [send me email](#)

#### Connect With Us

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## Lab#14(c)

### Lab#14(c). Implement Delete Operation to remove any student from Student Information System.

#### Code Snippet:

```
//delete student from database
exports.deleteStudent = (req, res) => {
  const id = req.params.id;

  const stmt = db.prepare("DELETE FROM students WHERE id = ?");

  stmt.run([id], (err) => {
    if (err) {
      console.error(err);
      res.status(500).send("Internal Server Error");
      return;
    }

    res.redirect("/sims/all");
  });

  stmt.finalize();
};
```