CREATE TABLE customers (

id INTEGER PRIMARY KEY,

name VARCHAR(255),

email VARCHAR(255),

phone VARCHAR(20),

address VARCHAR(255)

);

public class Customer {

private int id;

private String name;

private String email;

private String phone;

private String address;

// Constructors, getters, and setters

}

**create a JAX-RS resource class to handle HTTP requests:**

@Path("/customers")

public class CustomerResource {

@GET

@Produces(MediaType.APPLICATION\_JSON)

public List<Customer> getCustomers() {

List<Customer> customers = new ArrayList<>();

// Connect to the database using JDBC

try (Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:3306/mydatabase", "root", "password");

Statement stmt = conn.createStatement();

ResultSet rs = stmt.executeQuery("SELECT \* FROM customers")) {

// Iterate through the result set and add each customer to the list

while (rs.next()) {

Customer customer = new Customer();

customer.setId(rs.getInt("id"));

customer.setName(rs.getString("name"));

customer.setEmail(rs.getString("email"));

customer.setPhone(rs.getString("phone"));

customer.setAddress(rs.getString("address"));

customers.add(customer);

}

} catch (SQLException ex) {

ex.printStackTrace();

}

return customers;

}

**create a web service client to invoke the web service code:**

@PUT

@Path("/{id}")

@Consumes(MediaType.APPLICATION\_JSON)

public Response updateCustomer(@PathParam("id") int id, Customer customer) {

// Update the customer in the database using JDBC

try (Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:3306/mydatabase", "root", "password");

PreparedStatement stmt = conn.prepareStatement("UPDATE customers SET name=?, email=?, phone=?, address=? WHERE id=?")) {

stmt.setString(1, customer.getName());

stmt.setString(2, customer.getEmail());

stmt.setString(3, customer.getPhone());

stmt.setString(4, customer.getAddress());

stmt.setInt(5, id);

int rowsUpdated = stmt.executeUpdate();

if (rowsUpdated == 0) {

return Response.status(Response.Status.NOT\_FOUND).build();

}

} catch (SQLException ex) {

ex.printStackTrace();

return Response.status(Response.Status.INTERNAL\_SERVER\_ERROR).build();

}

return Response.ok().build();

}

}

public class CustomerClient {

public static void main(String[] args) {

// Create a client to communicate with the web service using JAX-RS

Client client = ClientBuilder.newClient();

// Get the list of customers from the web service

WebTarget target = client.target("http://localhost:8080/myapp/customers");

List<Customer> customers = target.request(MediaType.APPLICATION\_JSON).get(new GenericType<List<Customer>>() {});

System.out.println(customers);

// Update a customer in the database using the web service

Customer customer = new Customer();

customer.setName("John Doe");

customer.setEmail("johndoe@example.com");

customer.setPhone("555-123 1234");

customer.setAddress("123 Main St, Anytown USA");

Response response = target.path("1").request().put(Entity.entity(customer, MediaType.APPLICATION\_JSON));

System.out.println(response.getStatus());

client.close();

}

}

**Output:**

