Program 7:

Customer.java

```java
package com.jpa.project;
//import

@Entity
@Table(name="product")
public class Customer {

  @Id
  @GeneratedValue(strategy=GenerationType.AUTO)
  private Long id;
  private String firstName;
  private String lastName;

  protected Customer() {}

  public Customer(String firstName, String lastName) {
    this.firstName = firstName;
    this.lastName = lastName;
  }

  @Override
  public String toString() {
    return String.format(
        "Customer[id=%d, firstName='%s', lastName='%s']",
        id, firstName, lastName);
  }

  public Long getId() {
    return id;
  }

  public String getFirstName() {
    return firstName;
  }

  public String getLastName() {
    return lastName;
  }
}
```

Create a resource file called src/main/resources/application.properties, as the following listing shows:

```
spring.jpa.hibernate.ddl-auto=update
spring.datasource.url=jdbc:mysql://${MYSQL_HOST:localhost}:3306/db_example
spring.datasource.username=springuser
spring.datasource.password=ThePassword
spring.datasource.driver-class-name=com.mysql.cj.jdbc.Driver
#spring.jpa.show-sql: true
```

CustomerRepository.java

```java
import org.springframework.data.jpa.repository.JpaRepository;
public interface CustomerRepository extends JpaRepository<Customer, Long> { }
```

CustomerService.java

```java
package com.example.demohibernate;
//CustomerService.java
@Service
public class CustomerService {
        @Autowired
        private CustomerRepository customerRepository;
        public void addCustomer(String fname, String lname) {
                Customer customer = new Customer();
                customer.setFirstName(fname);
                customer.setLastName(lname);
                customerRepository.save(customer);
        }
        public List<Customer> getAllCustomers() {
                return customerRepository.findAll();
        }
        public void updateCustomer(long id, String fname, String lname) {
                Customer customer = customerRepository.findById(id).orElse(null);
                if (customer != null) {
                        customer.setFirstName(fname);
                        customer.setLastName(lname);
                        customerRepository.save(customer);
                }
        }
        public void deleteCustomer(long id) {
                customerRepository.deleteById(id);
        }
}
```

```java
//Main.Java
@SpringBootApplication
public class DemohibernateApplication {
    public static void main(String[] args) throws Exception{
    ConfigurableApplicationContext context =
SpringApplication.run(DemohibernateApplication.class, args);
        CustomerService customerService =
context.getBean(CustomerService.class);
        Scanner scanner = new Scanner(System.in);
        while (true) {
            System.out.println("\nMenu:");
            System.out.println("1. Add Customer");
            System.out.println("2. View All Customers");
            System.out.println("3. Update Customer");
            System.out.println("4. Delete Customer");
            System.out.println("5. Exit");
            System.out.print("Enter your choice: ");
            int choice = scanner.nextInt();
            scanner.nextLine(); // Consume the newline character
            switch (choice) {
            case 1:
                System.out.print("Enter customer first name: ");
                String fname = scanner.nextLine();
                System.out.print("Enter customer last name: ");
                String lname = scanner.nextLine();
                customerService.addCustomer(fname, lname);
                System.out.println("Customer added successfully!");
                break;
            case 2:
                System.out.println("All Customers:");

customerService.getAllCustomers().forEach(System.out::println);
                break;
            case 3:
                System.out.print("Enter customer id to update: ");
                long updateId = scanner.nextLong();
                scanner.nextLine(); // Consume the newline character
                System.out.print("Enter updated name: ");
                String updatedFName = scanner.nextLine();
                System.out.print("Enter updated email: ");
                String updatedLName = scanner.nextLine();
```

```java
                                customerService.updateCustomer(updateId, updatedFName,
updatedLName);

                                System.out.println("Customer updated successfully!");
                                break;
                        case 4:
                                System.out.print("Enter customer id to delete: ");
                                long deleteId = scanner.nextLong();
                                customerService.deleteCustomer(deleteId);
                                System.out.println("Customer deleted successfully!");
                                break;
                        case 5:
                                System.out.println("Exiting the program.");
                                context.close();
                                System.exit(0);
                                break;
                        default:
                                System.out.println("Invalid choice. Please enter a number
between 1 and 5.");
                        }
        }
    }
}
```