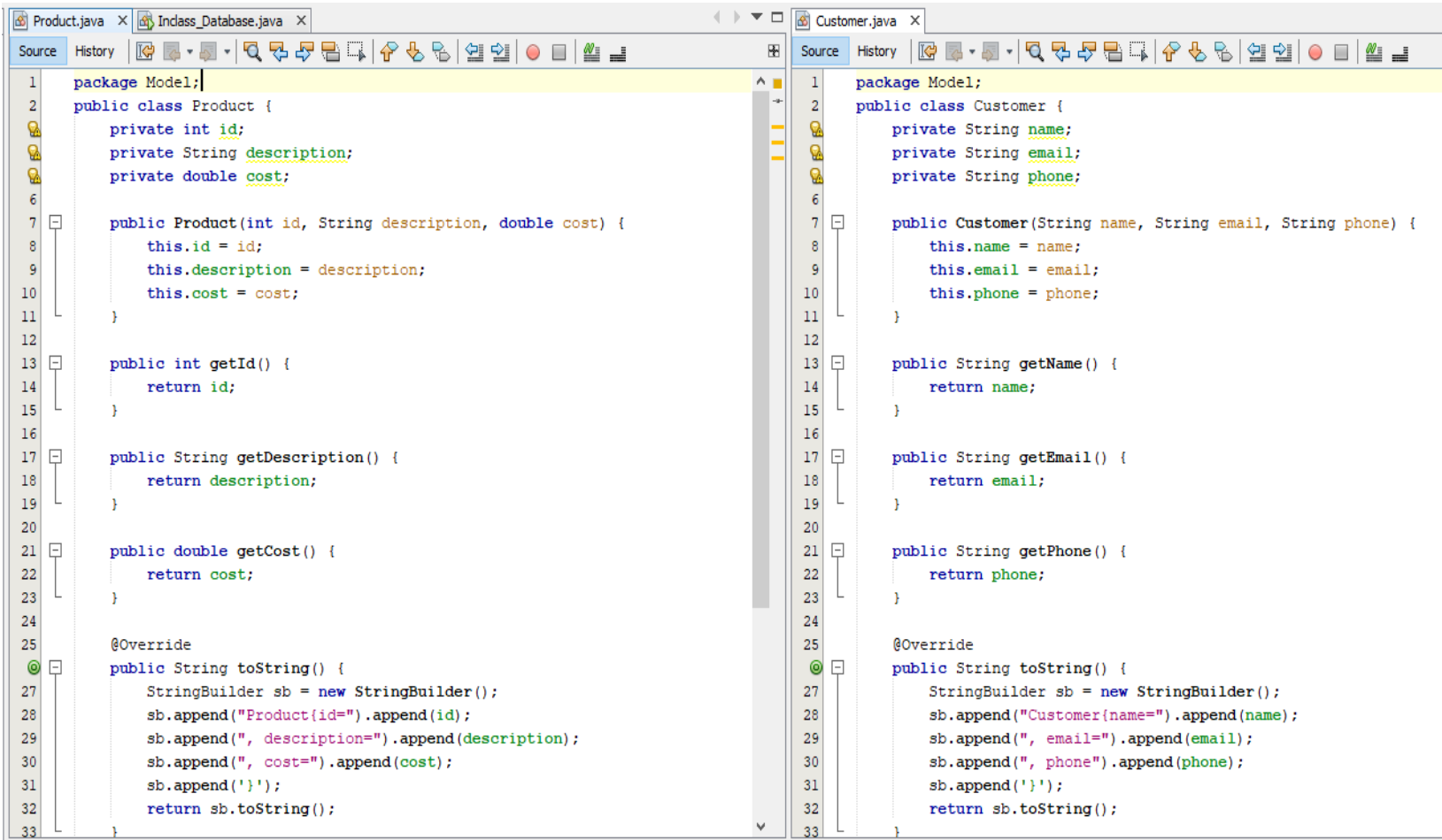


Database(Basic)



```
Product.java
package Model;

public class Product {
    private int id;
    private String description;
    private double cost;

    public Product(int id, String description, double cost) {
        this.id = id;
        this.description = description;
        this.cost = cost;
    }

    public int getId() {
        return id;
    }

    public String getDescription() {
        return description;
    }

    public double getCost() {
        return cost;
    }

    @Override
    public String toString() {
        StringBuilder sb = new StringBuilder();
        sb.append("Product{id=").append(id);
        sb.append(", description=").append(description);
        sb.append(", cost=").append(cost);
        sb.append('}');
        return sb.toString();
    }
}

Customer.java
package Model;

public class Customer {
    private String name;
    private String email;
    private String phone;

    public Customer(String name, String email, String phone) {
        this.name = name;
        this.email = email;
        this.phone = phone;
    }

    public String getName() {
        return name;
    }

    public String getEmail() {
        return email;
    }

    public String getPhone() {
        return phone;
    }

    @Override
    public String toString() {
        StringBuilder sb = new StringBuilder();
        sb.append("Customer{name=").append(name);
        sb.append(", email=").append(email);
        sb.append(", phone=").append(phone);
        sb.append('}');
        return sb.toString();
    }
}
```

showCustomer();

```
public class Inclass_Database {
    private static final String DRIVER = "org.apache.derby.jdbc.ClientDriver";
    private static final String DB_URL = "jdbc:derby://localhost:1527/sample";
    private static final String USER = "app";
    private static final String PASS = "app";

    public static void showCustomer() {

        Connection con = null;

        try {
            Class.forName(DRIVER);
            con = DriverManager.getConnection(DB_URL, USER, PASS);

            Statement stm = con.createStatement();
            ResultSet rs = stm.executeQuery("SELECT name,phone FROM customer");
            System.out.printf("%-30s %-12s\n", "NAME", "PHONE");

            while (rs.next()) {
                System.out.printf("%-30s %-12s\n", rs.getString("name"), rs.getString("phone"));
            }

        } catch (ClassNotFoundException ex) {
            System.out.println("Class not found :" + ex.getMessage());
        } catch (SQLException ex) {
            System.out.println("SQL exception :" + ex.getMessage());
        } finally {
            try {
                con.close();
            } catch (SQLException ex) {
            }
        }
    }
}
```

put X

class_Database (run) X	Java DB Database Process X
Jumbo Eagle Corp	305-555-0188
New Enterprises	305-555-0148
Wren Computers	214-555-0133
Small Bill Company	555-555-0175
Bob Hosting Corp.	650-555-0160
Early CentralComp	408-555-0157
John Valley Computers	408-555-0169
Big Network Systems	650-555-0181
West Valley Inc.	313-555-0172
Zed Motor Co	313-555-0151
Big Car Parts	313-555-0144
Old Media Productions	212-555-0110
Yankee Computer Repair Ltd	212-555-0191
BUILD SUCCESSFUL (total time: 1 second)	

showCustomerV2();

```
public static void showCustomer_V2() {
    try{
        Connection con = DriverManager.getConnection(DB_URL, USER, PASS);
        Statement stmt = con.createStatement();

        ResultSet rs = stmt.executeQuery("select * from customer");
        System.out.printf("%-30s %-12s\n", "NAME", "PHONE");
        while (rs.next()){
            System.out.printf("%-30s %-12s\n",rs.getString("name") ,rs.getString("phone"));
        }

        con.close();
        stmt.close();
        rs.close();
    } catch(SQLException ex) {
        System.out.println("SQL exception :" + ex.getMessage());
    }
}
```

put X

idass_Database (run) X

Java DB Database Process X

Jumbo Eagle Corp	305-555-0188
New Enterprises	305-555-0148
Wren Computers	214-555-0133
Small Bill Company	555-555-0175
Bob Hosting Corp.	650-555-0160
Early CentralComp	408-555-0157
John Valley Computers	408-555-0169
Big Network Systems	650-555-0181
West Valley Inc.	313-555-0172
Zed Motor Co	313-555-0151
Big Car Parts	313-555-0144
Old Media Productions	212-555-0110
Yankee Computer Repair Ltd	212-555-0191

BUILD SUCCESSFUL (total time: 0 seconds)

showCustomerV3();

```
public static void showCustomer_V3() {
    try (Connection con = DriverManager.getConnection(DB_URL, USER, PASS);
        Statement stm = con.createStatement();) {

        ResultSet rs = stm.executeQuery("SELECT name,phone,email FROM customer");

        List<Customer> cust_list = new ArrayList<>();
        while (rs.next()) {
            cust_list.add(new Customer(rs.getString("name"), rs.getString("email")
                                     , rs.getString("phone")));
        }

        System.out.println(cust_list);
        System.out.println(cust_list.get(0));

    } catch (SQLException ex) {
        System.out.println("SQL exception :" + ex.getMessage());
    }
}
```

put ×

idclass_Database (run) × Java DB Database Process ×

run:

```
[Customer{name=Jumbo Eagle Corp, email=jumboeagle@example.com, phone305-555-0188}, Customer{name=New Enterprises,
Customer{name=Jumbo Eagle Corp, email=jumboeagle@example.com, phone305-555-0188}
BUILD SUCCESSFUL (total time: 0 seconds)
```

showProduct();

```
public static void showProduct() {  
  
    try (Connection con = DriverManager.getConnection(DB_URL, USER, PASS);  
        Statement stm = con.createStatement();) {  
  
        ResultSet rs = stm.executeQuery("SELECT Description, Purchase_Cost FROM Product");  
        System.out.printf("%-60s %-12s\n", "Description", "Cost");  
  
        while (rs.next()) {  
            System.out.printf("%-60s %-12s\n", rs.getString("Description"), rs.getDouble("Purchase_Cost"));  
        }  
  
    } catch (SQLException ex) {  
        System.out.println("SQL exception :" + ex.getMessage());  
    }  
}
```

put ×

class_Database (run) ×

Java DB Database Process ×

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Computer Tool Kit	36.95
Flat screen Monitor	199.95
BUILD SUCCESSFUL (total time: 0 seconds)	