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### **APLIKASI “MASKERANYUK”**

1. Entities (object-object dasar) database.

- **barang**
- **pelanggan**
- **transaksi**

2. Attributes (sifat-sifat) masing-masing entity pada database

- **barang :**
  - ✓ id\_barang : (integer) PK
  - ✓ nama\_barang : (varchar(250))
  - ✓ harga\_barang : integer
- **pelanggan :**
  - ✓ id\_pelanggan : (integer) PK
  - ✓ nama\_pelanggan : (varchar(255))
  - ✓ alamat\_pelanggan : (varchar(255))
  - ✓ no\_telp : integer
- **transaksi :**
  - ✓ no\_transaksi : (integer) PK
  - ✓ tanggal\_transaksi : datetime
  - ✓ jumlah\_barang : integer
  - ✓ total : integer

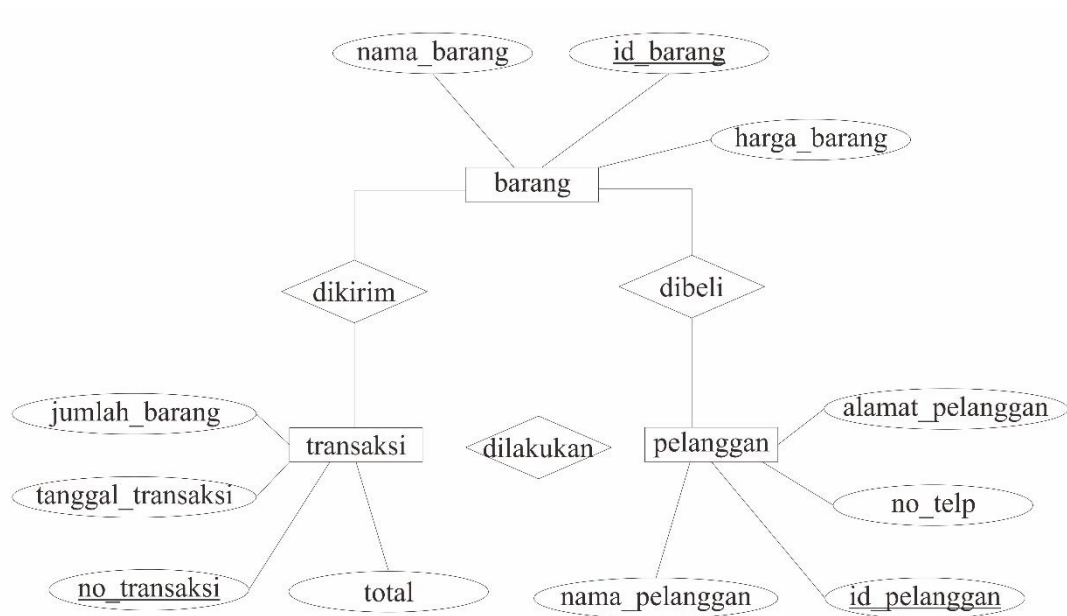
### 3. Relationship (hubungan) antar entitas

	barang	pelanggan	transaksi
barang	-	m:n	n:1
pelanggan		-	1:n
transaksi			-

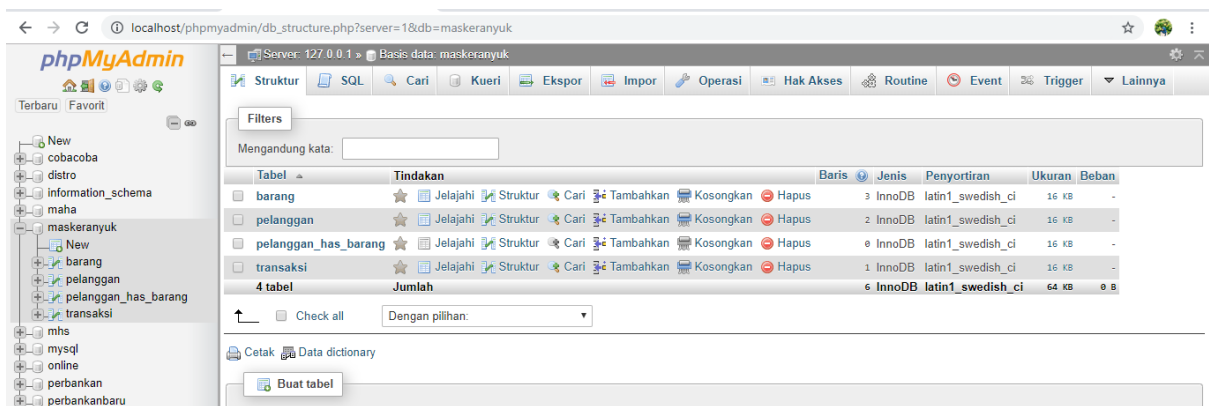
#### Hubungan

- **pelanggan membeli barang**
  - ✓ Tabel utama : pelanggan, barang
  - ✓ Tabel kedua : pelanggan\_has\_barang
  - ✓ Relationship : many-to-many (m:n)
  - ✓ Attribute penghubung : id\_barang, id\_pelanggan (FK id\_barang, id\_pelanggan di pelanggan\_has\_barang)
- **pelanggan melakukan transaksi**
  - ✓ Tabel utama : pelanggan
  - ✓ Tabel kedua : transaksi
  - ✓ Relationship : one-to-many (1:n)
  - ✓ Attribute penghubung : id\_pelanggan (FK id\_pelanggan di transaksi)
- **barang dikirim dengan transaksi**
  - ✓ Tabel utama : barang
  - ✓ Tabel kedua : transaksi
  - ✓ Relationship : many-to-one(n:1)
  - ✓ Attribute penghubung : id\_barang (FK id\_barang di transaksi)

#### 4. Menggambar ER Diagram



- Tampilan localhost maskeranyuk.sql



- Tabel pelanggan
  1. Insert

The screenshot shows a web form titled 'DATA PELANGGAN'. It contains four input fields: 'Id' (value: 2), 'Nama' (value: Tyas), 'Alamat' (value: Wonogiri), and 'Telepon' (value: 08799728675). To the right of these fields are three buttons: 'Tambah' (Add), 'Perbarui' (Update), and 'Hapus' (Delete). Below the input fields are two buttons: 'Selanjutnya' (Next) and 'Keluar' (Exit). At the bottom of the form is a table with four columns: 'id\_pelanggan', 'nama\_pelanggan', 'alamat\_pelanggan', and 'no\_telp'. The table contains three rows of data:

id_pelanggan	nama_pelanggan	alamat_pelanggan	no_telp
1	Aini	Sragen	085229191515
2	Tyas	Wonogiri	08799728675
3	Angieta	Sragen	085229926666

```
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    try {
        String sql = "INSERT INTO pelanggan VALUES ('" + nomor.getText() + "','"
            + nama.getText() + "','" + tempat.getText() + "','" + telp.getText() + "')";
        java.sql.Connection conn = (Connection) koneksi.koneksiDB();
        java.sql.PreparedStatement pst = conn.prepareStatement(sql);
        pst.execute();
        JOptionPane.showMessageDialog(null, "Penyimpanan Data Berhasil");
    } catch (SQLException | HeadlessException e) {
        JOptionPane.showMessageDialog(null, e);
    }
    GetData();
}
```

## 2. Update

**DATA PELANGGAN**

Id: 3  
Nama: Angieta  
Alamat: Solo  
Telepon: 08522992666

Tambah  
Perbarui  
Hapus

Selanjutnya Keluar

id_pelanggan	nama_pelanggan	alamat_pelanggan	no_telp
1	Aini	Sragen	085229191515
2	Tyas	Wonogiri	08799728675
3	Angieta	Solo	085229926666

```
private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
    try { //update data  
        String sql ="UPDATE pelanggan SET id_pelanggan = '"+nomor.getText()+  
            "', nama_pelanggan = '"+nama.getText()+"', alamat_pelanggan = '"+  
            +tempat.getText()+"', no_telp = '"+telp.getText()+"' WHERE id_pelanggan = '"  
            +nomor.getText()+"'";  
        java.sql.Connection conn=(Connection) koneksi.koneksiDB();  
        java.sql.PreparedStatement pst=conn.prepareStatement(sql);  
        pst.execute();  
        JOptionPane.showMessageDialog(null, "Data berhasil di perbarui");  
    } catch (SQLException | HeadlessException e) {  
        JOptionPane.showMessageDialog(null, "Perubahan Data Gagal"+e.getMessage());  
    }  
    GetData();  
}
```

## 3. Delete

**DATA PELANGGAN**

Id: 1  
Nama: Aini  
Alamat: Sragen  
Telepon: 085229191515

Tambah  
Perbarui  
Hapus

Selanjutnya Keluar

id_pelanggan	nama_pelanggan	alamat_pelanggan	no_telp
1	Aini	Sragen	085229191515
2	Tyas	Wonogiri	08799728675
3	Angieta	Solo	085229926666

id_pelanggan	nama_pelanggan	alamat_pelanggan	no_telp
2	Tyas	Wonogiri	08799728675
3	Angieta	Solo	085229926666

```
private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try { // hapus data
        String sql = "delete from pelanggan where id_pelanggan='" + nomor.getText() + "'";
        java.sql.Connection conn = (java.sql.Connection) tugas.koneksi.koneksiIDB();
        java.sql.PreparedStatement pst = conn.prepareStatement(sql);
        pst.execute();
        JOptionPane.showMessageDialog(null, "Data akan dihapus?");
        databaru = true;
        nomor.setText("");
        nama.setText("");
        tempat.setText("");
        telp.setText("");
    } catch (SQLException | HeadlessException e) {
    }
    GetData();
}
```

- Table barang
  1. Insert

id_barang	nama_barang	harga_barang
1	Daisy	5000
2	Kokinoya	15000
4	Garrier Sheet Mask	20000
7	Nature Republik	10000

```

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try {
        String sql = "INSERT INTO barang VALUES ('" + kobar.getText() + "','"
            + nabar.getText() + "','" + habar.getText() + "')";
        java.sql.Connection conn = (Connection) koneksi.koneksiDB();
        java.sql.PreparedStatement pst = conn.prepareStatement(sql);
        pst.execute();
        JOptionPane.showMessageDialog(null, "Penyimpanan Data Berhasil");
    } catch (SQLException | HeadlessException e) {
        JOptionPane.showMessageDialog(null, e);
    }
    GetData();
}

```

## 2. Update

id_barang	nama_barang	harga_barang
1	Daisy	5000
2	Kokinoya	15000
4	Gamier Sheet Mask	30000
7	Nature Republik	10000

```

private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try { //update data
        String sql = "UPDATE barang SET id_barang = '" + kobar.getText()
            + "', nama_barang = '" + nabar.getText() + "', harga_barang = '"
            + habar.getText() + "' WHERE id_barang = '" + kobar.getText() + "'";
        java.sql.Connection conn = (Connection) koneksi.koneksiDB();
        java.sql.PreparedStatement pst = conn.prepareStatement(sql);
        pst.execute();
        JOptionPane.showMessageDialog(null, "Data berhasil di perbarui");
    } catch (SQLException | HeadlessException e) {
        JOptionPane.showMessageDialog(null, "Perubahan Data Gagal" + e.getMessage());
    }
    GetData();
}

```

### 3. Delete

**DATA BARANG "MASKERANYUK"**

ID Barang:

Nama Barang:

Harga Barang:

id_barang	nama_barang	harga_barang
1	Daisy	5000
2	Kokinoya	15000
4	Garnier Sheet Mask	30000
7	Nature Republik	10000

**DATA BARANG "MASKERANYUK"**

ID Barang:

Nama Barang:

Harga Barang:

id_barang	nama_barang	harga_barang
1	Daisy	5000
2	Kokinoya	15000
4	Garnier Sheet Mask	30000

```
private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
    try { // hapus data  
        String sql = "delete from barang where id_barang='" + kobar.getText() + "'";  
        java.sql.Connection conn = (java.sql.Connection) tugas.koneksi.koneksiIDB();  
        java.sql.PreparedStatement pst = conn.prepareStatement(sql);  
        pst.execute();  
        JOptionPane.showMessageDialog(null, "Data akan dihapus?");  
        databaru = true;  
        kobar.setText("");  
        nabar.setText("");  
        habar.setText("");  
    } catch (SQLException | HeadlessException e) {  
    }  
    GetData();  
}
```



- Table transaksi
  - Insert

**DATA TRANSAKSI**

Id Pelanggan: 2 Jumlah Barang: 5

Kode Barang: 4 Harga Barang: 30000

Nomor Transaksi: 22

Tanggal Transaksi: 18 Juni 2019 Total: 150000

id_pelangg...	id_barangFK	no_transaksi	tanggal_tra...	jumlah_bar...	total
1	1	11	2019-07-05...	4	20000
2	4	22	2019-07-05...	5	150000

```
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try {
        String sql = "INSERT INTO transaksi VALUES ('" + nomor.getText() + "','"
            + kobar.getText() + "','" + notrans.getText() + "','" + tabarl + "','"
            + jabar.getText() + "','" + total.getText() + "')";
        java.sql.Connection conn = (Connection) koneksi.koneksiDB();
        java.sql.PreparedStatement pst = conn.prepareStatement(sql);
        pst.execute();
        JOptionPane.showMessageDialog(null, "Penyimpanan Data Berhasil");
    } catch (SQLException | HeadlessException e) {
        JOptionPane.showMessageDialog(null, e);
    }
    GetData();
}
```

## 2. Update

**DATA TRANSAKSI**

Id Pelanggan: 1 Jumlah Barang: 5

Kode Barang: 1 Harga Barang: 5000

Nomor Transaksi: 11

Tanggal Transaksi: 2019-07-05 00:00:00.0 Total: 25000

id_pelangg...	id_barangFK	no_transaksi	tanggal_tra...	jumlah_bar...	total
1	1	11	2019-07-05...	5	25000
2	4	22	2019-07-05...	5	150000

```

private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try { //update data
        String sql = "UPDATE transaksi SET id_pelangganFK = '"+nomor.getText()
            +"', id_barangFK = '" + kobar.getText() + "', no_transaksi = '"
            + notrans.getText() + "', tanggal_transaksi = '"+tabar.getText()
            + "', jumlah_barang = '"+jabar.getText() + "', Total = '" + total.getText()
            + "' WHERE no_transaksi = '"+ notrans.getText() + "'";

        java.sql.Connection conn=(Connection) koneksi.koneksiDB();
        java.sql.PreparedStatement pst=conn.prepareStatement(sql);
        pst.execute();
        JOptionPane.showMessageDialog(null, "Data berhasil di perbarui");
    } catch (SQLException | HeadlessException e) {
        JOptionPane.showMessageDialog(null, "Perubahan Data Gagal"+e.getMessage());
    }
    GetData();
}

```

### 3. Delete

id_pelangg...	id_barangFK	no_transaksi	tanggal_tra...	jumlah_bar...	total
1	1	11	2019-07-05 ...	5	25000
2	4	22	2019-07-05 ...	5	150000

id_pelangg...	id_barangFK	no_transaksi	tanggal_tra...	jumlah_bar...	total
1	1	11	2019-07-05 ...	5	25000

```

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try { // hapus data
        String sql = "DELETE from transaksi where no_transaksi = '" + notrans.getText() + "'";
        java.sql.Connection conn = (java.sql.Connection) tugas.koneksi.koneksiDB();
        java.sql.PreparedStatement pst = conn.prepareStatement(sql);
        pst.execute();
        JOptionPane.showMessageDialog(null, "Data akan dihapus?");
        databaru = true;
        nomor.setText("");
        kobar.setText("");
        notrans.setText("");
        tabar.setText("");
        jabar.setText("");
        habar.setText("");
        total.setText("");
    } catch (SQLException | HeadlessException e) {
    }
    GetData();
}

```

- Buka pada cmd

```

Command Prompt - mysql -u root -p

mysql> use maskernyuk;
Database changed
mysql> show tables;
+-----+
| Tables_in_maskernyuk |
+-----+
| barang                |
| pelanggan             |
| pelanggan_has_barang  |
| transaksi              |
+-----+
4 rows in set (0.00 sec)

mysql> select * from barang;
+-----+
| id_barang | nama_barang      | harga_barang |
+-----+
| 1         | Daisy            | 5000         |
| 2         | Kokinoya         | 15000        |
| 4         | Garnier Sheet Mask | 30000        |
+-----+
3 rows in set (0.00 sec)

mysql> select * from pelanggan;
+-----+
| id_pelanggan | nama_pelanggan | alamat_pelanggan | no_telp |
+-----+
| 2            | Tyas           | Monogiri         | 08799728675 |
| 3            | Angieta        | Solo              | 085229926666 |
+-----+
2 rows in set (0.00 sec)

mysql> select * from transaksi;
+-----+
| id_pelangganFK | id_barangFK | no_transaksi | tanggal_transaksi | jumlah_barang | total |
+-----+
| 1              | 1           | 11           | 2019-07-05 00:00:00 | 5             | 25000 |
+-----+
1 row in set (0.00 sec)

mysql>

```