Nama   : Yudhistira Kusuma
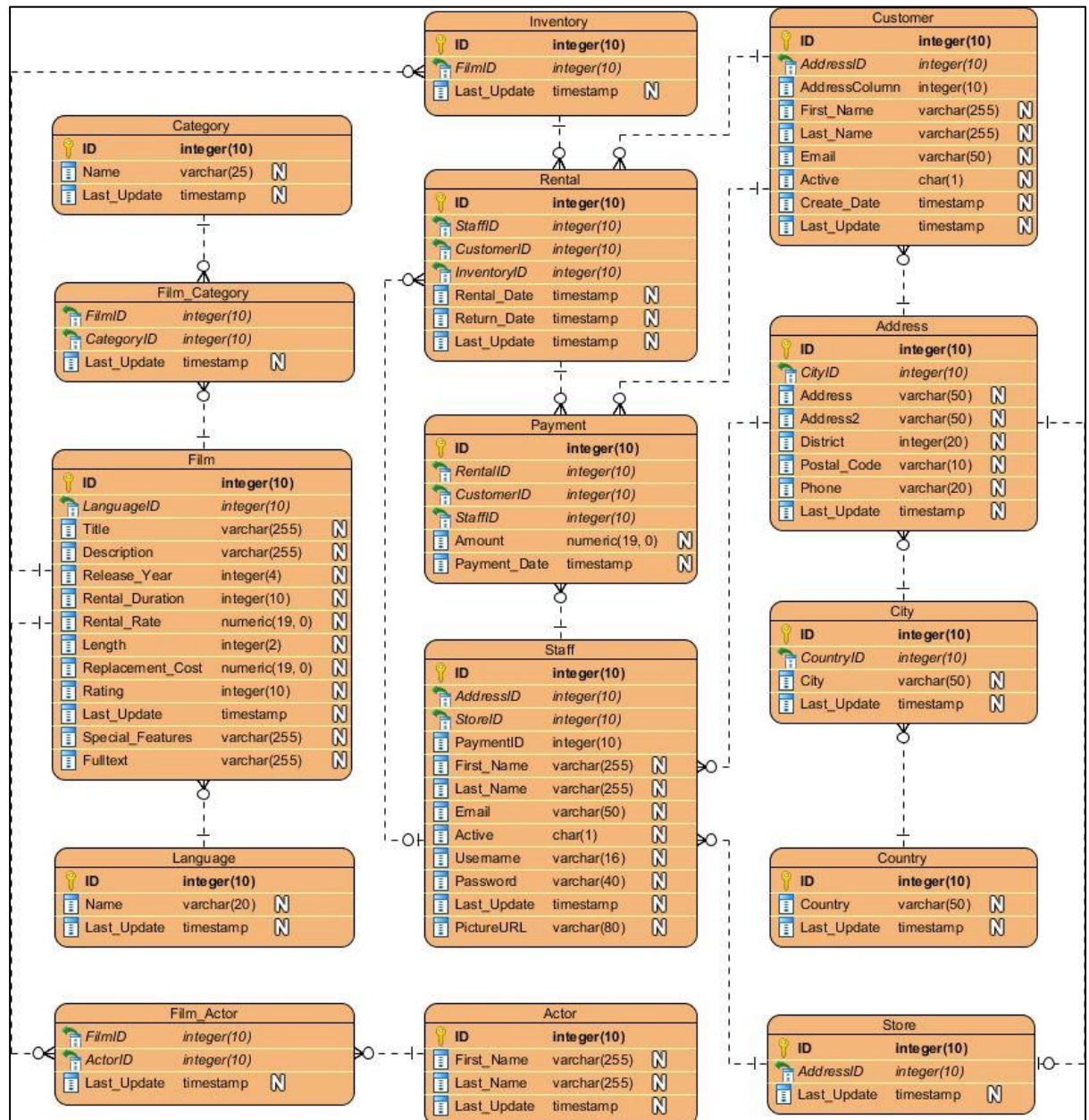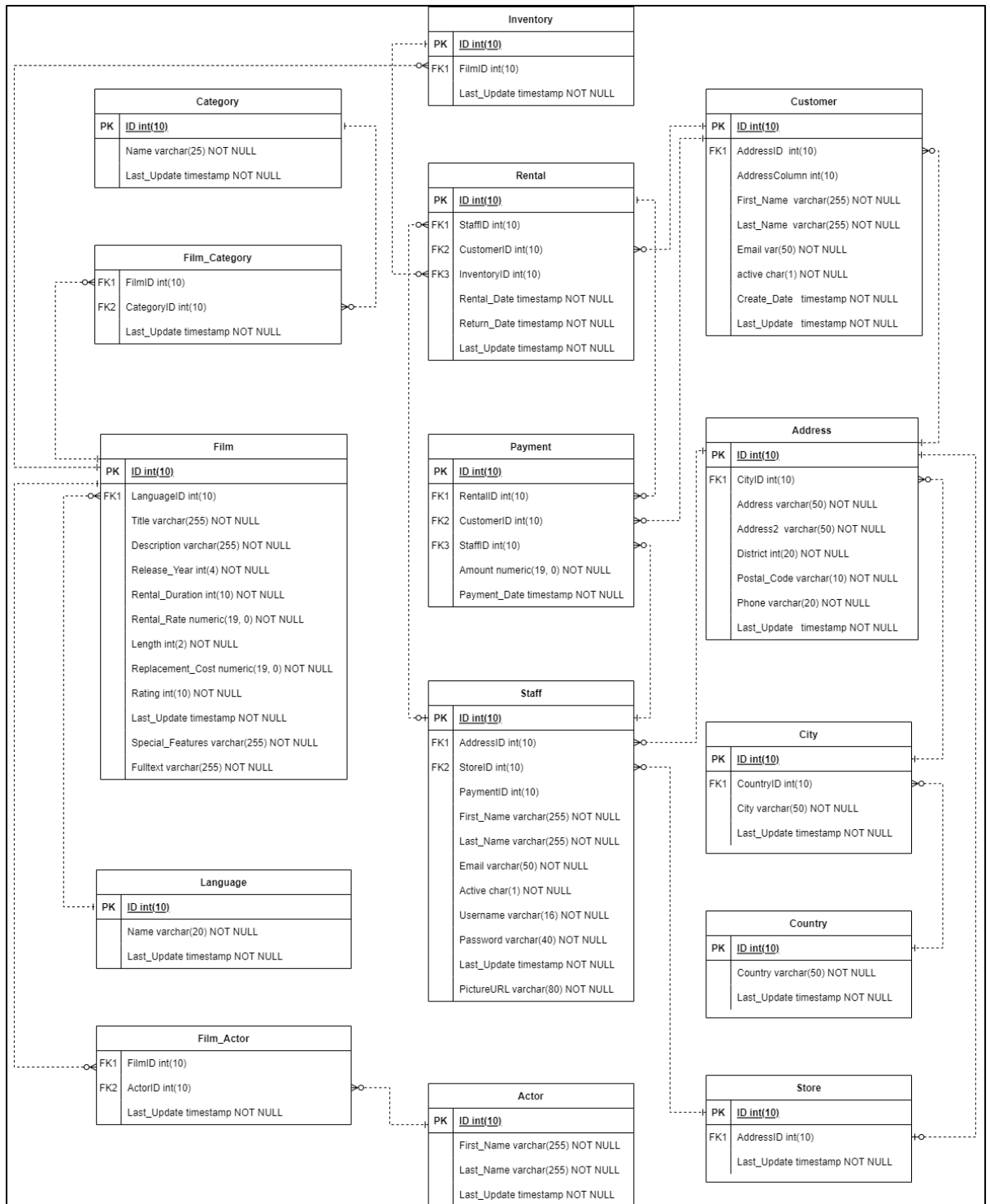NPM   : 202310067
Kelas   : 6 TI-20-PA1
Matkul : Lab. Basis Data Lanjut

1. Membuat ulang diagram dibawah ini di drawio!

Link:
https://drive.google.com/file/d/1OwuwNWbzDRfEFPNA92LCe_ql6ghstWpa/view?usp=sharing

2. Membuat Database

```
CREATE DATABASE pemesananfilm;
```

[Edit inline] [Edit] [Create PHP code]

3. Menyiapkan tabel

```
CREATE TABLE Category (ID int(10) AUTO_INCREMENT, Name varchar(25) NOT NULL, LastUpdate timestamp NOT NULL, PRIMARY KEY(ID));
```

[Edit inline] [Edit] [Create PHP code]

```
CREATE TABLE Film_Category (FilmID int(10), CategoryID int(10), LastUpdate timestamp NOT NULL);
```

[Edit inline] [Edit] [Create PHP code]

```
CREATE TABLE Film ( ID int(10) AUTO_INCREMENT, LanguageID int(10), Title varchar(255) NOT NULL, Description varchar(255) NOT NULL, Release_Year int(4) NOT NULL, Rental_Duration int(10) NOT NULL, Rental_Rate numeric(19, 0) NOT NULL, Length int(2) NOT NULL, Replacement_Cost numeric(19, 0) NOT NULL, Rating int(10) NOT NULL, Last_Update timestamp NOT NULL, Special_Features varchar(255) NOT NULL, Fullteks varchar(255) NOT NULL, PRIMARY KEY(ID) );
```

[Edit inline] [Edit] [Create PHP code]

```
CREATE TABLE Language ( ID int(10) AUTO_INCREMENT, Name varchar(20) NOT NULL, Last_Update timestamp NOT NULL, PRIMARY KEY(ID) );
```

[Edit inline] [Edit] [Create PHP code]

```
CREATE TABLE Film_Actor ( FilmID int(10), ActorID int(10), Last_Update timestamp NOT NULL );
```

[Edit inline] [Edit] [Create PHP code]

```
CREATE TABLE Inventory (ID int(10) AUTO_INCREMENT, FilmID int(10), Last_Update timestamp NOT NULL, PRIMARY KEY(ID) );
```

[Edit inline] [Edit] [Create PHP code]

```
CREATE TABLE Rental (ID int(10) AUTO_INCREMENT, StaffID int(10), CustomerID int(10), InventoryID int(10), Rental_Date date NOT NULL, Return_Date date NOT NULL, Last_Update timestamp NOT NULL, PRIMARY KEY(ID) );
```

[Edit inline] [Edit] [Create PHP code]

*tidak bisa multiple timestamp dalam satu tabel

```
CREATE TABLE Payment (ID int(10) AUTO_INCREMENT, RentalID int(10), CustomerID int(10), StaffID int(10), Amount numeric(19,0) NOT NULL, Payment_Date timestamp NOT NULL, PRIMARY KEY(ID) );
```

[Edit inline] [Edit] [Create PHP code]

```
CREATE TABLE Staff ( ID int(10) AUTO_INCREMENT, AddressID int(10), StoreID int(10), PaymentID int(10), First_Name varchar(255) NOT NULL, Last_Name varchar(255) NOT NULL, Email varchar(50) NOT NULL, Active char(1) NOT NULL, Username varchar(16) NOT NULL, Passwords varchar(40) NOT NULL, Last_Update timestamp NOT NULL, PictureURL varchar(80) NOT NULL, PRIMARY KEY(ID) );
```

[Edit inline] [Edit] [Create PHP code]

```
CREATE TABLE Actor ( ID int(10) AUTO_INCREMENT, First_Name varchar(255) NOT NULL, Last_Name varchar(255) NOT NULL, Last_Update timestamp NOT NULL, PRIMARY KEY(ID) );
```

[Edit inline] [Edit] [Create PHP code]

```
CREATE TABLE Customer ( ID int(10) AUTO_INCREMENT, AddressID int(10), AddressColumn int(10), First_Name varchar(255) NOT NULL, Last_Name varchar(255) NOT NULL, Email varchar(50) NOT NULL, Active char(1) NOT NULL, Create_Date date NOT NULL, Last_Update timestamp NOT NULL, PRIMARY KEY(ID) );
```

[Edit inline] [Edit] [Create PHP code]

```
CREATE TABLE Address ( ID int(10) AUTO_INCREMENT, CityID int(10), Address varchar(50) NOT NULL, Address2 varchar(50) NOT NULL, District int(20) NOT NULL, Postal_Code varchar(10) NOT NULL, Phone varchar(20) NOT NULL, Last_Update timestamp NOT NULL, PRIMARY KEY(ID) );
```

[Edit inline] [Edit] [Create PHP code]

```
CREATE TABLE City ( ID int(10) AUTO_INCREMENT, CountryID int(10), City varchar(50) NOT NULL, Last_Update timestamp NOT NULL, PRIMARY KEY(ID) );
```

[Edit inline] [Edit] [Create PHP code]

```
CREATE TABLE Country ( ID int(10) AUTO_INCREMENT, Country varchar(50) NOT NULL, Last_Update timestamp NOT NULL, PRIMARY KEY(ID) );
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0215 seconds.)

```
CREATE TABLE Store ( ID int(10) AUTO_INCREMENT, AddressID int(10), Last_Update timestamp NOT NULL, PRIMARY KEY(ID) );
```

[Edit inline] [Edit] [Create PHP code]

4. Relasi tabel

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0387 seconds.)

```
ALTER TABLE film_category ADD FOREIGN KEY (FilmID) REFERENCES film(ID);
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0257 seconds.)

```
ALTER TABLE film_category ADD FOREIGN KEY (CategoryID) REFERENCES category(ID);
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0810 seconds.)

```
ALTER TABLE film ADD FOREIGN KEY (LanguageID) REFERENCES language(ID);
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0537 seconds.)

```
ALTER TABLE film_actor ADD FOREIGN KEY (FilmID) REFERENCES film(ID);
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0372 seconds.)

```
ALTER TABLE film_actor ADD FOREIGN KEY (ActorID) REFERENCES actor(ID);
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0541 seconds.)

```
ALTER TABLE inventory ADD FOREIGN KEY (FilmID) REFERENCES film(ID);
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0659 seconds.)

```
ALTER TABLE rental ADD FOREIGN KEY (StaffID) REFERENCES staff(ID);
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0272 seconds.)

```
ALTER TABLE rental ADD FOREIGN KEY (CustomerID) REFERENCES customer(ID);
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0373 seconds.)

```
ALTER TABLE rental ADD FOREIGN KEY (InventoryID) REFERENCES inventory(ID);
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0525 seconds.)

```
ALTER TABLE payment ADD FOREIGN KEY (RentalID) REFERENCES rental(ID);
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0314 seconds.)

```
ALTER TABLE payment ADD FOREIGN KEY (CustomerID) REFERENCES customer(ID);
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0313 seconds.)

```
ALTER TABLE payment ADD FOREIGN KEY (StaffID) REFERENCES staff(ID);
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0422 seconds.)

```
ALTER TABLE staff ADD FOREIGN KEY (AddressID) REFERENCES address(ID);
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0219 seconds.)

```
ALTER TABLE staff ADD FOREIGN KEY (StoreID) REFERENCES store(ID);
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0524 seconds.)

```
ALTER TABLE customer ADD FOREIGN KEY (AddressID) REFERENCES address(ID);
```

[Edit inline] [Edit] [Create PHP code]

✅ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0552 seconds.)

```sql
ALTER TABLE address ADD FOREIGN KEY (CityID) REFERENCES city(ID);
```
[Edit inline] [Edit] [Create PHP code]

✅ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0255 seconds.)

```sql
ALTER TABLE city ADD FOREIGN KEY (CountryID) REFERENCES country(ID);
```
[Edit inline] [Edit] [Create PHP code]

✅ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0532 seconds.)

```sql
ALTER TABLE store ADD FOREIGN KEY (AddressID) REFERENCES address(ID);
```
[Edit inline] [Edit] [Create PHP code]

5. Contoh Insert, Update, dan Delete data pada tabel
- Insert

✅ 1 row inserted.
Inserted row id: 1 (Query took 0.0020 seconds.)

```sql
INSERT INTO category (Name) VALUES ('Horror');
```
[Edit inline] [Edit] [Create PHP code]

✅ 1 row inserted.
Inserted row id: 2 (Query took 0.0020 seconds.)

```sql
INSERT INTO category (Name) VALUES ('Drama');
```
[Edit inline] [Edit] [Create PHP code]

✅ 1 row inserted.
Inserted row id: 3 (Query took 0.0018 seconds.)

```sql
INSERT INTO category (Name) VALUES ('Comedy');
```
[Edit inline] [Edit] [Create PHP code]

Hasil:

				ID	Name	LastUpdate
☐	🖊 Edit	Copy	⊝ Delete	1	Horror	2023-03-02 12:18:16
☐	🖊 Edit	Copy	⊝ Delete	2	Drama	2023-03-02 12:19:44
☐	🖊 Edit	Copy	⊝ Delete	3	Comedy	2023-03-02 12:20:05

* Hanya insert nama karena ID sudah auto increment dan LastUpdate menggunakan timestamp

- Update

✅ 1 row affected. (Query took 0.0041 seconds.)

```sql
UPDATE category SET Name = 'Thriller' WHERE ID = 2;
```
[Edit inline] [Edit] [Create PHP code]

Hasil:

				ID	Name	LastUpdate
☐	🖊 Edit	Copy	⊝ Delete	1	Horror	2023-03-02 12:18:16
☐	🖊 Edit	Copy	⊝ Delete	2	Thriller	2023-03-02 12:23:09
☐	🖊 Edit	Copy	⊝ Delete	3	Comedy	2023-03-02 12:20:05

- Delete

✅ 1 row affected. (Query took 0.0024 seconds.)

```sql
DELETE FROM category WHERE Name = 'Comedy';
```
[Edit inline] [Edit] [Create PHP code]

Hasil:

←T→			▼	ID	Name	LastUpdate
☐	🖉 Edit	Copy	⊖ Delete	1	Horror	2023-03-02 12:18:16
☐	🖉 Edit	Copy	⊖ Delete	2	Thriller	2023-03-02 12:23:09

Bukti Insert Tabel:

✔ 2 rows inserted.

```sql
INSERT INTO `actor` (`ID`, `First_Name`, `Last_Name`, `Last_Update`) VALUES ('1', 'Yudhistira', 'Kusuma', current_timestamp()), ('2', 'Muhammad', 'Ilham', current_timestamp());
```

[Edit inline] [Edit] [Create PHP code]

✔ 2 rows inserted.

```sql
INSERT INTO `country` (`ID`, `Country`, `Last_Update`) VALUES ('1', 'Indonesia', current_timestamp()), ('2', 'Singapura', current_timestamp());
```

[Edit inline] [Edit] [Create PHP code]

✔ 2 rows inserted.

```sql
INSERT INTO `city` (`ID`, `CountryID`, `City`, `Last_Update`) VALUES ('1', '1', 'Bogor', current_timestamp()), ('2', '1', 'Bandung', current_timestamp());
```

[Edit inline] [Edit] [Create PHP code]

✔ 2 rows inserted.

```sql
INSERT INTO `address` (`ID`, `CityID`, `Address`, `Address2`, `District`, `Postal_Code`, `Phone`, `Last_Update`) VALUES ('1', '1', 'Jl Farmasi I BF 12', 'Bumi Menteng Asri', '1', '12111', '081234567890', current_timestamp()), ('2', '2', 'Jl. Kenanga no.17', 'Lembang', '2', '13111', '081212345678', current_timestamp());
```

[Edit inline] [Edit] [Create PHP code]

✔ 2 rows inserted.

```sql
INSERT INTO `customer` (`ID`, `AddressID`, `AddressColumn`, `First_Name`, `Last_Name`, `Email`, `Active`, `Create_Date`, `Last_Update`) VALUES ('1', '3', '1', 'Mervin', 'Ruswan', 'MervinRuswan@gmail.com', 'Y', '2023-03-02', current_timestamp()), ('2', '4', '2', 'Ryan', 'Sachio', 'RyanSachio@gmail.com', 'Y', '2023-03-02', current_timestamp());
```

[Edit inline] [Edit] [Create PHP code]

✔ 3 rows inserted.

```sql
INSERT INTO `language` (`ID`, `Name`, `Last_Update`) VALUES ('1', 'Indonesia', current_timestamp()), ('2', 'Inggris', current_timestamp()), ('3', 'Jepang', current_timestamp());
```

[Edit inline] [Edit] [Create PHP code]

✔ 1 row inserted. (Query took 0.0023 seconds.)

```sql
INSERT INTO `film` (`ID`, `LanguageID`, `Title`, `Description`, `Release_Year`, `Rental_Duration`, `Rental_Rate`, `Length`, `Replacement_Cost`, `Rating`, `Last_Update`, `Special_Features`, `Fullteks`) VALUES ('2', '1', 'Kabar Baik', 'Lorem Ipsum1', '2022', '120', '4.5', '90', '1500000', '4', current_timestamp(), '-', '-');
```

[Edit inline] [Edit] [Create PHP code]

✔ 2 rows inserted.

```sql
INSERT INTO `film_actor` (`FilmID`, `ActorID`, `Last_Update`) VALUES ('1', '1', current_timestamp()), ('1', '2', current_timestamp());
```

[Edit inline] [Edit] [Create PHP code]

✔ 2 rows inserted.

```sql
INSERT INTO `film_category` (`FilmID`, `CategoryID`, `LastUpdate`) VALUES ('1', '1', current_timestamp()), ('2', '1', current_timestamp());
```

[Edit inline] [Edit] [Create PHP code]

✔ 2 rows inserted.

```sql
INSERT INTO `inventory` (`ID`, `FilmID`, `Last_Update`) VALUES ('1', '1', current_timestamp()), ('2', '2', current_timestamp());
```

[Edit inline] [Edit] [Create PHP code]

✔ 2 rows inserted.

```sql
INSERT INTO `store` (`ID`, `AddressID`, `Last_Update`) VALUES ('1', '5', current_timestamp()), ('2', '6', current_timestamp());
```

[Edit inline] [Edit] [Create PHP code]

✔ 2 rows inserted.

```sql
INSERT INTO `staff` (`ID`, `AddressID`, `StoreID`, `PaymentID`, `First_Name`, `Last_Name`, `Email`, `Active`, `Username`, `Passwords`, `Last_Update`, `PictureURL`) VALUES ('1', '5', '1', '1', 'Ahmad', 'Robani', 'AhmadRobani@gmail.com', 'Y', 'AhmadRobani', 'AhmadRobani123', current_timestamp(), '-'), ('2', '6', '2', '2', 'Dadang', 'Suherman', 'DadangSuherman@gmail.com', 'Y', 'DadangSuherman', 'DadangSuherman123', current_timestamp(), '-');
```

[Edit inline] [Edit] [Create PHP code]

✔ 2 rows inserted.

```sql
INSERT INTO `rental` (`ID`, `StaffID`, `CustomerID`, `InventoryID`, `Rental_Date`, `Return_Date`, `Last_Update`) VALUES ('1', '1', '1', '1', '2023-03-02', '2023-03-02', current_timestamp()), ('2', '2', '2', '2', '2023-03-02', '2023-03-02', current_timestamp());
```

[Edit inline] [Edit] [Create PHP code]

✔ 2 rows inserted.

```sql
INSERT INTO `payment` (`ID`, `RentalID`, `CustomerID`, `StaffID`, `Amount`, `Payment_Date`) VALUES ('1', '1', '1', '1', '2', current_timestamp()), ('2', '2', '2', '2', '5', current_timestamp());
```

[Edit inline] [Edit] [Create PHP code]