PROJECT PRESENTATION

# Data Management Using Python

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# Contents

ABDA
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# Brief Introduction

Our project focuses on the implementation of Python CRUD for data collection of a humanitarian foundation's donations. We use an SQL database as data storage connected to Python with the SQL connector feature.

# Python Configuration

```
donationPDF.py  ×

1    import mysql.connector, sys, os
2    from decimal import Decimal, InvalidOperation
3    from datetime import datetime
4    from admin_auth import passLoop, set_password
```

```
admin_auth.py  ×

1    import sys, hashlib, hmac, json, secrets, pwinput
2    from pathlib import Path
```

We use 2 python files, where the first file is used to store the code for data processing, and the second file is for password management.

```
14    DB_CONFIG = {
15        "host": "localhost",
16        "user": "root",
17        "password": "56&abcABC",
18        "database": "donationDataSys_db"
19    }
```

```
33    def get_connection():  6 usages
34        return mysql.connector.connect(**DB_CONFIG)
```

```
404        conn = get_connection()
405        cur = conn.cursor(dictionary=True)
```

```
428        finally:
429            cur.close()
430            conn.close()
```

First, we need to install the connection library with the command **pip install mysql-connector** in the terminal.

After that, we can create a connection to the database. The database we will use is called **donationDataSys_db**.

So when it has been defined at the beginning, then in the functions that will be used, it can simply be called within the def to open the connection, and at the end to close the connection.

```python
37   def safe_input(prompt, default=None, required=False):   31 usages
38       while True:
39           s = input(prompt).strip()
40           if s == "" and default is not None:
41               return default
42           if required and s == "":
43               print("Field must be filled.")
44               continue
45       return s
```
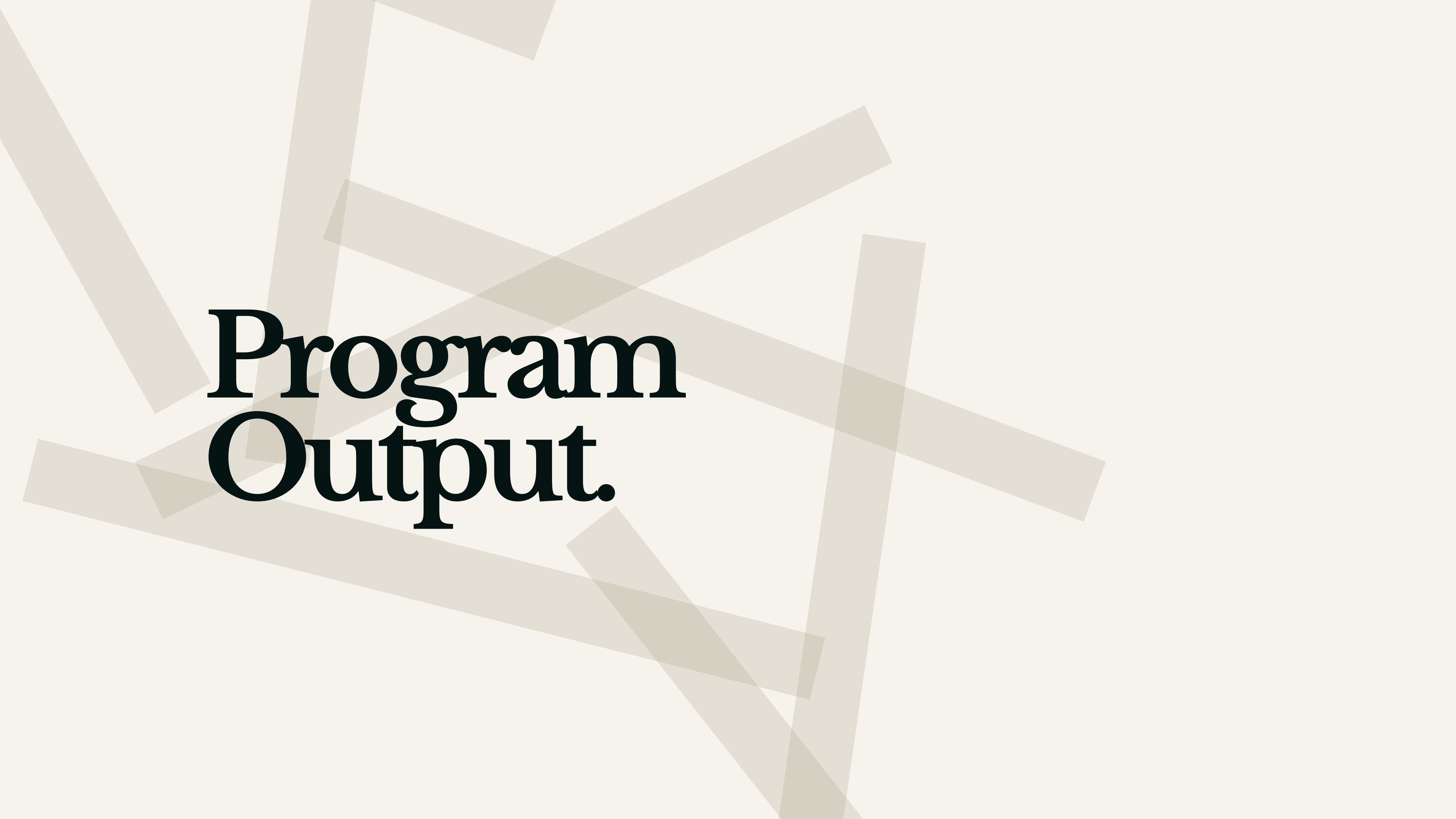
```python
59   def normalize_kind(s):   2 usages
60       if not s:
61           return None
62       s = s.lower().strip()
63       if s in ("barang", "i", "g"):
64           return "items"
65       if s in ("money", "uang", "m"):
66           return "money"
67       return s
```

**safe_input** for the input. If **required=True** and
you press Enter, it shows "Field must be filled."
and asks again until you type something.

**normalize** for standarization/shortening inputs
to a single form, for example on line 52, typing
"personal", "person", or "p" all becomes "per".

```python
48   def normalize_base(s):   2 usages
49       if not s:
50           return None
51       s = s.lower().strip()
52       if s in ("personal", "person", "per", "p"):
53           return "per"
54       if s in ("company", "com", "c"):
55           return "com"
56       return s
```

# Program Output.

# Login And Main Menu

## Login

```
LOGIN SECTION

password first bro: ????

WRONGGGG. 2 LEFT FOR YOU

password first bro: ???

WRONGGGG. 1 LEFT FOR YOU

password first bro: ?????
GET OUTTTT
```

```
password first bro: ????????
WELCOME ADMIN

 <<< Donation Management >>>
1. Add Donor
2. Edit Donor
3. View All Donors
4. Search Donor
5. Delete Donor
6. Password Manager
7. Print Receipt
8. Exit
choose menu (1-8): ▊
```

# Add donor

```
Add Donor
 Name: Pau Cubarsi
 NIK: 9922010101
Donation base (personal/company): com
Company Name: PT. Tani Indojayadi
Address: Surabaya, Jawa Timur
Kind (money/items): i
Desc (optional): Donasi tahunan
Accepted with id 34
Item Name: Beras
Quantity : 100 kg
ALHAMDULILLAH SUCCESSFUL.
Cetak struk sekarang? (y/n): y
receipt saved: receipts/receipt_34_items_15_20250924-133654.pdf
```

```
Add Donor
 Name: Joan Garcia
 NIK: 552341
Donation base (personal/company): p
Address: Jl. Merdeka, Kukusan, Depok
Kind (money/items): money
Desc (optional): infaq pendidikan anak yatim
Accepted with id 32
Payment (cash/transfer/qr): cash
Amount (rupiah): 70000000
SUBMITTED YEYYY.
Cetak struk sekarang? (y/n): y
receipt saved: receipts/receipt_32_money_19_20250924-132611.pdf
```

Size A6

**YAYASAN ALHIKMAH**

**BUKTI DONASI**

———————————————————————
Tanggal : 2025-09-24 13:26:11
ID Donor : 32
NIK : 552341
Nama : Joan Garcia
Base : per
Company : -
Alamat : Jl. Merdeka, Kukusan, Depok
Desc: infaq pendidikan anak yatim

———————————————————————

**Detail Donasi:**
Tipe: Uang
ID Transaksi: 19
Pembayaran: cash
Jumlah: Rp 70.000.000

———————————————————————

Terima kasih atas donasi Anda
semoga berkah dunia dan akhirat.

(tanda tangan)

Add Donor

# Edit And Show Donor List

```
=== Edit Donor ===
NIK of donor that you want to change: 552341
Leave empty what will not be changed.
Name [Joan Garcia]: Joan Garcia Setiawan
NIK [552341]:
Donation base (personal/company) [per]:
Address [Jl. Merdeka, Kukusan, Depok]:
Donation kind (money/items) [money]:
Description [infaq pendidikan anak yatim]:
successfully updated.

=== Edit Money Donation ===
Payment (cash/transfer/qr) [cash]:
Amount [70000000.00]:
SUCCESSFULLY UPDATED.
```

```
choose menu (1-8): 3

=== All Donor List ===
----------------------------------------------------
id: 34 | name: Pau Cubarsi | nik: 9922010101 | base: com | kind: items | date: 2025-09-24 13:36:45
  company: PT. Tani Indojayadi
  address: Surabaya, Jawa Timur
  desc: Donasi tahunan
----------------------------------------------------
id: 32 | name: Joan Garcia Setiawan | nik: 552341 | base: per | kind: money | date: 2025-09-24 13:25:35
  address: Jl. Merdeka, Kukusan, Depok
  desc: infaq pendidikan anak yatim
----------------------------------------------------
id: 31 | name: hazard | nik: 20000234 | base: per | kind: money | date: 2025-09-24 09:10:12
  address: germany
  desc: hanya untuk anak yatim
----------------------------------------------------
```

Edit Donor View All Donor

# Search And Delete Donor

```
=== search Donor ===
enter NIK or Name: jamal
==========================================
ID Donor       : 30
NIK            : 5678567
Name           : jamal musiala
kind           : money
Base           : per
company        : -
Address        : solo
Desc           : donasi hari raya
Input Date     : 2025-09-24 09:07:12
-- Money Donation --
   id_money=17 | method=transfer | amount=60000000.00
==========================================
```

```
=== Delete Donor ===
enter NIK donor that will be deleted: 5678567
Are you sure you want to delete the donation with id=30? (type 'y' for confirmation): y
successfully deleted.
```

# Password Manager

```
6. Password Manager
7. Print Receipt
8. Exit
choose menu (1-8): 6
Masukkan password baru: ********
Ulangi password: ********
Password stored /Users/muhammadabda/PycharmProjects/PythonProjectCCIT/pass.json
```

# Print Receipt

```
=== Print Receipt ===
Enter NIK or Name or ID Donor: maya
Some record founded (more than one):
  id= 23 | name= Maya Sari | nik= 5005
  id= 16 | name= Maya Sari | nik= 5005
choose id_donor (clear it if you want cancel): 23

Donations:
1. MONEY | id_money=12 | cash | 25000.00 | 2025-09-23 10:32:41

Choose the number you want to print or type 'a' to print all or type 'l' to print the last one
Your Choice: a
Receipts Saved: receipts/receipt_23_money_12_20250924-142541.pdf
```

# Exiting the Program

```
 <<< Donation Management >>>
1. Add Donor
2. Edit Donor
3. View All Donors
4. Search Donor
5. Delete Donor
6. Password Manager
7. Print Receipt
8. Exit
choose menu (1-8): 8
thank you admin byeeeee
```

# SQL Database.

# Query

```sql
1   CREATE DATABASE IF NOT EXISTS `donationDataSys_db`
2       CHARACTER SET = utf8mb4
3       COLLATE = utf8mb4_general_ci;
4   USE `donationDataSys_db`;


6   CREATE TABLE `donors` (
7       `id_donor` INT UNSIGNED NOT NULL AUTO_INCREMENT,
8       `name` VARCHAR(255) NOT NULL,
9       `nik` VARCHAR(64) NOT NULL,
10      `donationBase` ENUM('per','com') NOT NULL,
11      `company_name` VARCHAR(255) DEFAULT NULL,
12      `address` TEXT NOT NULL,
13      `donationKind` ENUM('money','items') NOT NULL,
14      `description` TEXT DEFAULT NULL,
15      `date` DATETIME NOT NULL DEFAULT CURRENT_TIMESTAMP,
16      PRIMARY KEY (`id_donor`)
17  ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

```sql
19  CREATE TABLE `money_donations` (
20      `id_money` INT UNSIGNED NOT NULL AUTO_INCREMENT,
21      `id_donor` INT UNSIGNED NOT NULL,
22      `name` VARCHAR(255) NOT NULL,
23      `paymentMethod` ENUM('cash','transfer','qr') NOT NULL,
24      `amount` DECIMAL(15,2) NOT NULL,
25      PRIMARY KEY (`id_money`),
26      CONSTRAINT `fk_money_donor` FOREIGN KEY (`id_donor`)
27          REFERENCES `donors` (`id_donor`)
28          ON DELETE CASCADE
29  ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

```sql
31  CREATE TABLE `item_donations` (
32      `id_items` INT UNSIGNED NOT NULL AUTO_INCREMENT,
33      `id_donor` INT UNSIGNED NOT NULL,
34      `name` VARCHAR(255) NOT NULL,
35      `itemName` VARCHAR(255) NOT NULL,
36      `Quantity` TEXT NOT NULL,
37      PRIMARY KEY (`id_items`),
38      CONSTRAINT `fk_items_donor` FOREIGN KEY (`id_donor`)
39          REFERENCES `donors` (`id_donor`)
40          ON DELETE CASCADE
41  ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

# Tables

## donors

| i... | name | nik | donationBase | company_name | address | donationKind | description | date |
|---|---|---|---|---|---|---|---|---|
| 1 | ahmad subarjo | 1001 | com | PT JIJAJA | depok | money | | 2025-09-18 13:48:37 |
| 2 | aisha | 2004 | com | PT. Rahayu | jakarta | items | | 2025-09-18 13:52:22 |
| 3 | Ahmad Fauzi | 1005 | per | NULL | Jl. Sudirman No.10, Bandung | money | Donasi rutin bulanan | 2025-09-18 14:23:23 |
| 4 | Siti Aisyah | 1006 | per | NULL | Jl. Merdeka 5, Jakarta | items | Sembako untuk bulan ramadhan | 2025-09-18 14:23:23 |
| 5 | PT Maju Jaya | 1007 | com | Maju Jaya | Jl. Industri 8, Bekasi | money | CSR program | 2025-09-18 14:23:23 |
| 6 | Bambang Santoso | 1008 | per | NULL | Jl. Melati 12, Yogyakarta | items | NULL | 2025-09-18 14:23:23 |
| 7 | Nadya Rahma | 2005 | per | NULL | Jl. Pahlawan 3, Surabaya | money | Donasi untuk pendidikan | 2025-09-18 14:23:23 |
| 8 | CV Sumber Berkah | 2006 | com | Sumber Berkah | Jl. Gudang 2, Semarang | items | Sumbangan pakaian layak pakai | 2025-09-18 14:23:23 |
| 9 | Rudi Hartono | 2007 | per | NULL | Jl. Kenanga 7, Medan | money | NULL | 2025-09-18 14:23:23 |
| 10 | Lina Marlina | 2008 | per | NULL | Jl. Anggrek 4, Bandung | items | Donasi peralatan sekolah | 2025-09-18 14:23:23 |
| 11 | PT Cahaya Indon... | 2009 | com | Cahaya Indon... | Jl. Raya Bogor Km.10, Bogor | money | Matching grant | 2025-09-18 14:23:23 |
| 12 | Agus Setiawan | 5002 | per | NULL | Jl. Gajah Mada 20, Solo | items | NULL | 2025-09-18 14:23:23 |
| 13 | Farah Nabila | 5003 | per | NULL | Jl. Diponegoro 15, Malang | money | Donasi sekali tiap event | 2025-09-18 14:23:23 |

## money_donations

| id_money | id_donor | name | paymentMeth... | amount |
|---|---|---|---|---|
| 1 | 1 | ahmad | cash | 200000.00 |
| 2 | 3 | Ahmad Fauzi | transfer | 250000.00 |
| 3 | 5 | PT Maju Jaya | transfer | 5000000.00 |
| 4 | 7 | Nadya Rahma | cash | 300000.00 |
| 5 | 9 | Rudi Hartono | qr | 150000.00 |
| 6 | 11 | PT Cahaya Indonesia | transfer | 7500000.00 |
| 7 | 13 | Farah Nabila | cash | 100000.00 |

## item_donations

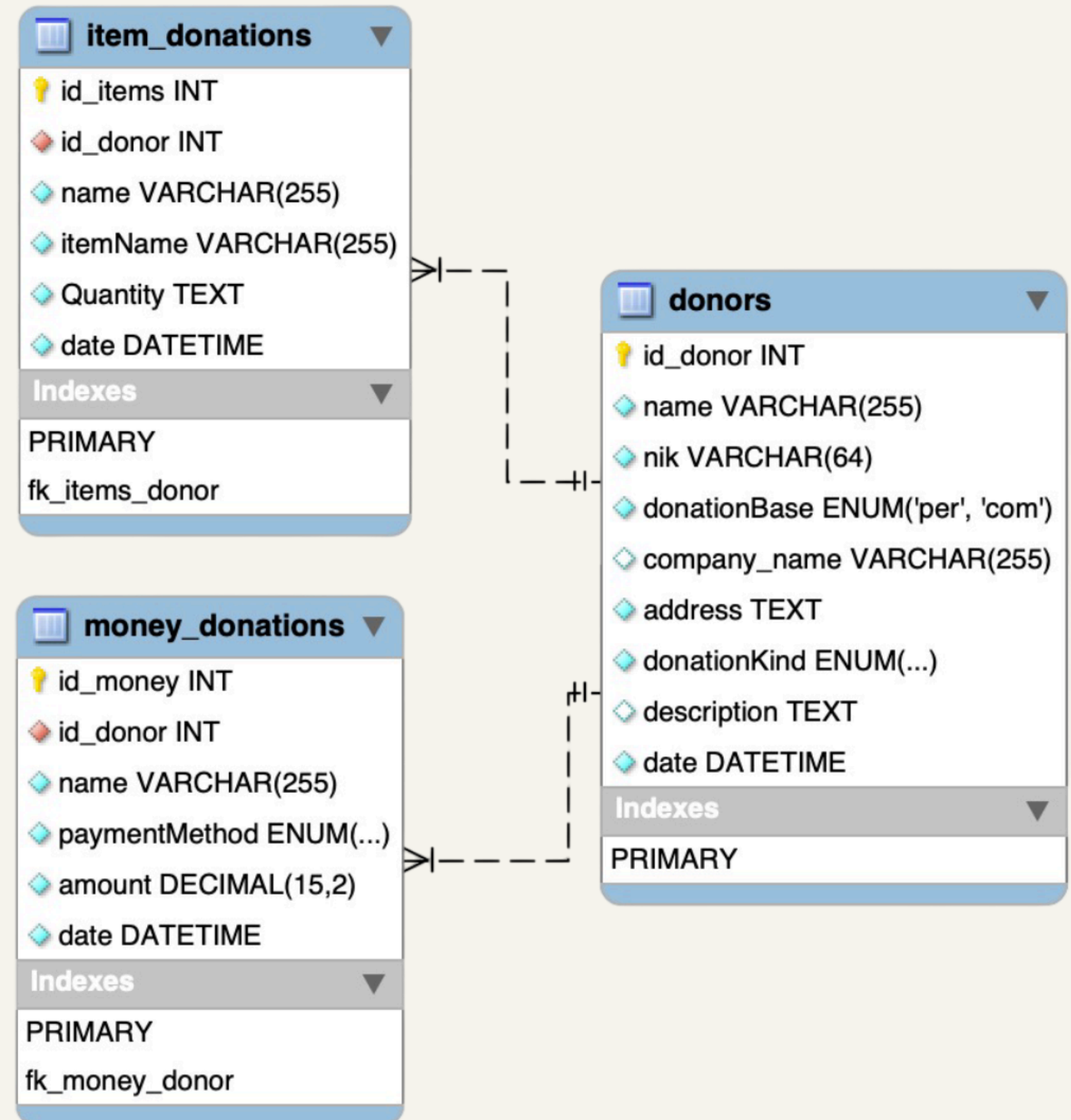| id_items | id_donor | name | itemName | Quantity |
|---|---|---|---|---|
| 1 | 2 | aisha | beras | 200 kg |
| 2 | 4 | Siti Aisyah | Beras | 50 kg |
| 3 | 6 | Bambang Santoso | Minyak Goreng | 20 liter |
| 4 | 8 | CV Sumber Berkah | Pakaian Bekas | 10 karung |
| 5 | 10 | Lina Marlina | Alat Tulis | 5 kardus |
| 6 | 12 | Agus Setiawan | Buku Pelajaran | 100 pcs |

# View

```sql
44  CREATE OR REPLACE VIEW donor_overview AS
45  SELECT
46      d.id_donor, d.name AS donor_name, d.donationBase, d.company_name,
47      d.donationKind, i.itemName, i.Quantity, m.paymentMethod, m.amount
48  FROM donors d
49  LEFT JOIN item_donations i ON d.id_donor = i.id_donor
50  LEFT JOIN money_donations m ON d.id_donor = m.id_donor
51  ORDER BY d.id_donor;
```

## donor_overview

| id_donor | donor_name | donationBase | company_name | donationKind | itemName | Quantity | paymentMeth... | amount |
|---|---|---|---|---|---|---|---|---|
| 1 | ahmad subarjo | com | PT JIJAJA | money | NULL | NULL | cash | 200000.00 |
| 2 | aisha | com | PT. Rahayu | items | beras | 200 kg | NULL | NULL |
| 3 | Ahmad Fauzi | per | NULL | money | NULL | NULL | transfer | 250000.00 |
| 4 | Siti Aisyah | per | NULL | items | Beras | 50 kg | NULL | NULL |
| 5 | PT Maju Jaya | com | Maju Jaya | money | NULL | NULL | transfer | 5000000.00 |
| 6 | Bambang Santoso | per | NULL | items | Minyak Goreng | 20 liter | NULL | NULL |
| 7 | Nadya Rahma | per | NULL | money | NULL | NULL | cash | 300000.00 |
| 8 | CV Sumber Berkah | com | Sumber Berkah | items | Pakaian Bekas | 10 karung | NULL | NULL |
| 9 | Rudi Hartono | per | NULL | money | NULL | NULL | qr | 150000.00 |
| 10 | Lina Marlina | per | NULL | items | Alat Tulis | 5 kardus | NULL | NULL |
| 11 | PT Cahaya Indon... | com | Cahaya Indon... | money | NULL | NULL | transfer | 7500000.00 |
| 12 | Agus Setiawan | per | NULL | items | Buku Pelajaran | 100 pcs | NULL | NULL |
| 13 | Farah Nabila | per | NULL | money | NULL | NULL | cash | 100000.00 |

# The End

THANK YOU FOR LISTENING

Raahil Muhammad Wildan | Muhammad Ramadhan Ikhlaashul Abda