

#### GROUP-4-INTELLITECH Members:

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1. Review your diagram for the database making sure that the design is complete and normalized.

2. Create the database in SQL Server

```
1 CREATE DATABASE music_shop;
```

3. Create the tables in the new database, selecting appropriate data types for the columns, setting a primary key for each table, and setting allow nulls as appropriate

#### Customers table

```
2 CREATE TABLE Customers (  
3     customer_id INT(11) AUTO_INCREMENT PRIMARY KEY,  
4     first_name VARCHAR(50) NOT NULL,  
5     last_name VARCHAR(50) NOT NULL,  
6     email VARCHAR(100) NULL UNIQUE,  
7     phone_number VARCHAR(15) DEFAULT NULL,  
8     address VARCHAR(255) DEFAULT NULL,  
9     city VARCHAR(50) DEFAULT NULL,  
10    state VARCHAR(50) DEFAULT NULL,  
11    zip_code VARCHAR(10) DEFAULT NULL,  
12    album_id INT(11) DEFAULT NULL,  
13    INDEX (email),  
14    INDEX (album_id),  
15    FOREIGN KEY (album_id) REFERENCES Albums(album_id)  
16 );
```

## Suppliers table

```
1 CREATE TABLE Suppliers (  
2     supplier_id INT AUTO_INCREMENT PRIMARY KEY,  
3     company_name VARCHAR(100) NOT NULL,  
4     contact_name VARCHAR(50),  
5     contact_email VARCHAR(100),  
6     contact_phone VARCHAR(15),  
7     address VARCHAR(255),  
8     city VARCHAR(50),  
9     state VARCHAR(50),  
10    zip_code VARCHAR(10),  
11    album_id INT(11) DEFAULT NULL,  
12    INDEX (album_id),  
13    FOREIGN KEY (album_id) REFERENCES Albums(album_id)  
14 );
```

## Albums table

```
1 CREATE TABLE Albums (  
2     album_id INT AUTO_INCREMENT PRIMARY KEY,  
3     title VARCHAR(100) NOT NULL,  
4     artist VARCHAR(100) NOT NULL,  
5     release_year YEAR,  
6     genre VARCHAR(50),  
7     price DECIMAL(10, 2) NOT NULL,  
8     rarity ENUM('Common', 'Rare', 'Very Rare') NOT NULL  
9 );
```

## Inventory table

```
1 CREATE TABLE Inventory (  
2     inventory_id INT AUTO_INCREMENT PRIMARY KEY,  
3     album_id INT,  
4     supplier_id INT,  
5     quantity_in_stock INT NOT NULL,  
6     purchase_date DATE,  
7     cost_price DECIMAL(10, 2),  
8     FOREIGN KEY (album_id) REFERENCES Albums(album_id),  
9     FOREIGN KEY (supplier_id) REFERENCES Suppliers(supplier_id)  
10 );
```

## Employees table

```
1 CREATE TABLE Employees (  
2     employee_id INT AUTO_INCREMENT PRIMARY KEY,  
3     first_name VARCHAR(50) NOT NULL,  
4     last_name VARCHAR(50) NOT NULL,  
5     email VARCHAR(100) UNIQUE NOT NULL,  
6     phone_number VARCHAR(15),  
7     hire_date DATE,  
8     position VARCHAR(50)  
9 );
```

## Sales table

```
1 CREATE TABLE Sales (  
2     sale_id INT AUTO_INCREMENT PRIMARY KEY,  
3     customer_id INT,  
4     employee_id INT,  
5     sale_date DATE NOT NULL,  
6     total_amount DECIMAL(10, 2),  
7     FOREIGN KEY (customer_id) REFERENCES Customers(customer_id),  
8     FOREIGN KEY (employee_id) REFERENCES Employees(employee_id)  
9 );
```

## Returns table

```
1 CREATE TABLE Returns (  
2     return_id INT AUTO_INCREMENT PRIMARY KEY,  
3     sale_id INT,  
4     return_date DATE NOT NULL,  
5     reason TEXT,  
6     FOREIGN KEY (sale_id) REFERENCES Sales(sale_id)  
7 );
```

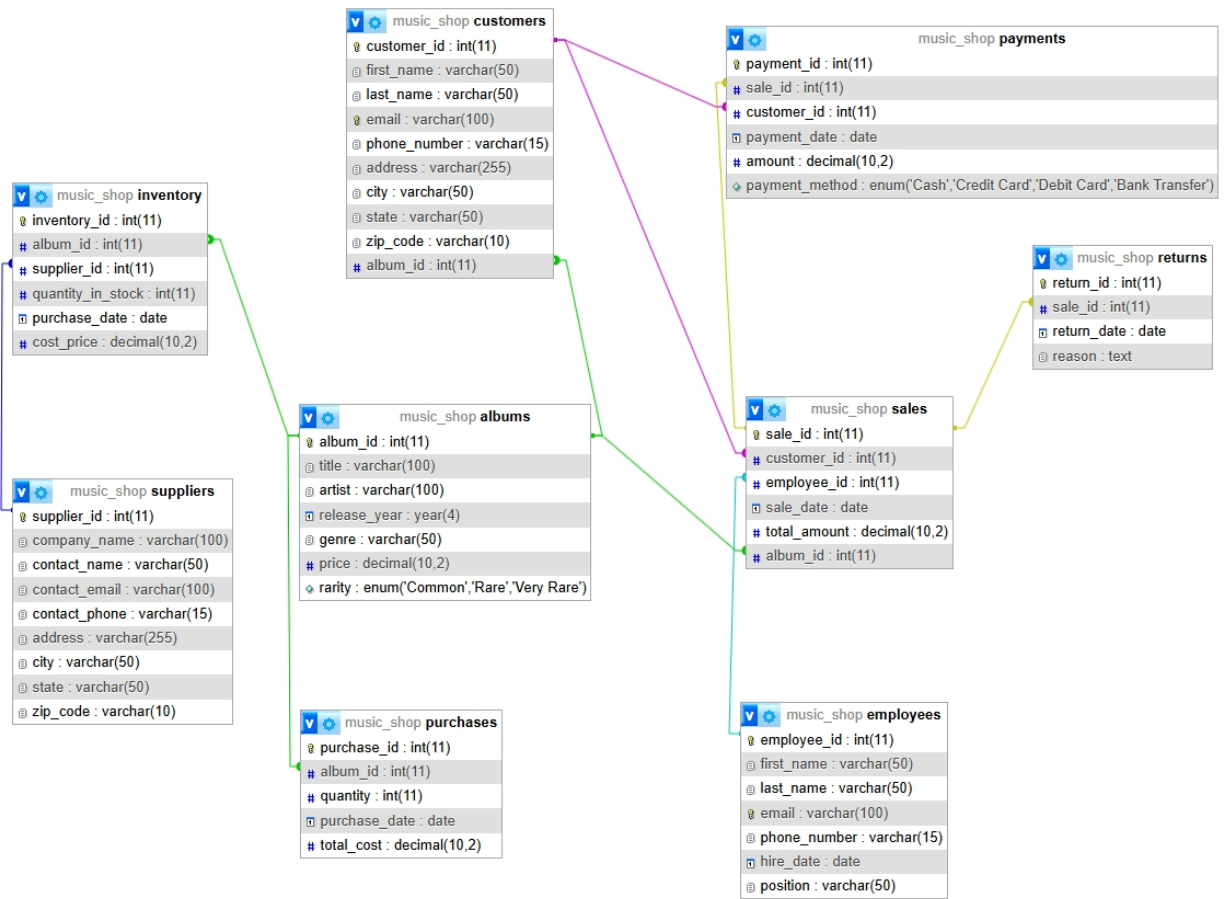
## Purchases table

```
1 CREATE TABLE Purchases (  
2     purchase_id INT AUTO_INCREMENT PRIMARY KEY,  
3     album_id INT,  
4     quantity INT NOT NULL,  
5     purchase_date DATE NOT NULL,  
6     total_cost DECIMAL(10, 2),  
7     FOREIGN KEY (album_id) REFERENCES Albums(album_id)  
8 );
```

## Payments table

```
1 CREATE TABLE Payments (  
2     payment_id INT AUTO_INCREMENT PRIMARY KEY,  
3     sale_id INT,  
4     customer_id INT,  
5     payment_date DATE NOT NULL,  
6     amount DECIMAL(10, 2) NOT NULL,  
7     payment_method ENUM('Cash', 'Credit Card', 'Debit Card', 'Bank Transfer') NOT NULL,  
8     FOREIGN KEY (sale_id) REFERENCES Sales(sale_id),  
9     FOREIGN KEY (customer_id) REFERENCES Customers(customer_id)  
10 );
```

#### 4. Create a database diagram and create the relationships among tables



## 5. Add some sample data to each table

### Insert data in table Albums


```
1 INSERT INTO Albums (title, artist, release_year, genre, price, rarity)
2 VALUES
3     ('Abbey Road', 'The Beatles', 1969, 'Rock', 29.99, 'Rare'),
4     ('Thriller', 'Michael Jackson', 1982, 'Pop', 24.99, 'Very Rare'),
5     ('Back in Black', 'AC/DC', 1980, 'Rock', 19.99, 'Common'),
6     ('Dark Side of the Moon', 'Pink Floyd', 1973, 'Progressive Rock', 34.99, 'Very Rare'),
7     ('Nevermind', 'Nirvana', 1991, 'Grunge', 22.99, 'Rare');
```

`SELECT * FROM `albums``

☐ Profiling [\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Explain SQL \]](#) [\[ Create PHP code \]](#) [\[ Refresh \]](#)

☐ Show all | Number of rows:  | Filter rows:  | Sort by key:

Extra options

← T →				album_id	title	artist	release_year	genre	price	rarity
<input type="checkbox"/>	 Edit	 Copy	 Delete	1	Abbey Road	The Beatles	1969	Rock	1000.00	Rare
<input type="checkbox"/>	 Edit	 Copy	 Delete	2	Thriller	Michael Jackson	1982	Pop	2000.00	Very Rare
<input type="checkbox"/>	 Edit	 Copy	 Delete	3	Back in Black	AC/DC	1980	Rock	3000.00	Common
<input type="checkbox"/>	 Edit	 Copy	 Delete	4	Dark Side of the Moon	Pink Floyd	1973	Progressive Rock	4000.00	Very Rare
<input type="checkbox"/>	 Edit	 Copy	 Delete	5	Nevermind	Nirvana	1991	Grunge	5000.00	Rare

### Insert data in table Customers
















```
1 INSERT INTO Customers (first_name, last_name, email, phone_number, address, city, state, zip_code, album_id)
2 VALUES
3     ('Juan', 'Dela Cruz', 'juan.delacruz@gmail.com', '+63 912 345 6789', '123 Mabini St', 'Manila', 'NCR', '1000', 1),
4     ('Maria', 'Santos', 'maria.santos@gmail.com', '+63 923 456 7890', '456 Rizal Ave', 'Quezon City', 'NCR', '1100', 2),
5     ('Pedro', 'Reyes', 'pedro.reyes@gmail.com', '+63 934 567 8901', '789 Bonifacio St', 'Cebu City', 'Cebu', '6000', 3),
6     ('Ana', 'Rodriguez', 'ana.rodriguez@gmail.com', '+63 945 678 9012', '101 Ortega St', 'Davao City', 'Davao del Sur', '8000', 4),
7     ('Jose', 'Gonzalez', 'jose.gonzalez@gmail.com', '+63 956 789 0123', '202 Araullo St', 'Iloilo City', 'Iloilo', '5000', 5);
```

`SELECT * FROM `customers``

☐ Profiling [\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Explain SQL \]](#) [\[ Create PHP code \]](#) [\[ Refresh \]](#)

☐ Show all | Number of rows:  | Filter rows:  | Sort by key:

Extra options

← T →		▼ customer_id	first_name	last_name	email	phone_number	address	city	state	zip_code	album_id
<input type="checkbox"/>	 Edit  Copy  Delete	1	Juan	Dela Cruz	juan.delacruz@gmail.com	+63 912 345 678	123 Mabini St	Manila	NCR	1000	1
<input type="checkbox"/>	 Edit  Copy  Delete	2	Maria	Santos	maria.santos@gmail.com	+63 923 456 789	456 Rizal Ave	Quezon City	NCR	1100	2
<input type="checkbox"/>	 Edit  Copy  Delete	3	Pedro	Reyes	pedro.reyes@gmail.com	+63 934 567 890	789 Bonifacio St	Cebu City	Cebu	6000	3
<input type="checkbox"/>	 Edit  Copy  Delete	4	Ana	Rodriguez	ana.rodriguez@gmail.com	+63 945 678 901	101 Ortega St	Davao City	Davao del Sur	8000	4
<input type="checkbox"/>	 Edit  Copy  Delete	5	Jose	Gonzalez	jose.gonzalez@gmail.com	+63 956 789 012	202 Araullo St	Iloilo City	Iloilo	5000	5



Insert data in table suppliers

```
1 INSERT INTO Suppliers (company_name, contact_name, contact_email, contact_phone, address, city, state, zip_code)
2 VALUES
3     ('Music World', 'Carlos Mendoza', 'carlos.mendoza@musicworld.com', '+63 912 345 6789', '321 Harmony St', 'Manila', 'NCR', '1000'),
4     ('Beat Records', 'Luz Ramirez', 'luz.ramirez@beatrecords.com', '+63 923 456 7890', '654 Melody Ave', 'Quezon City', 'NCR', '1100'),
5     ('Sound Shop', 'Rafael Santos', 'rafael.santos@soundshop.com', '+63 934 567 8901', '987 Rhythm Blvd', 'Cebu City', 'Cebu', '6000'),
6     ('Vinyl Haven', 'Nina Reyes', 'nina.reyes@vinylhaven.com', '+63 945 678 9012', '102 Bass St', 'Davao City', 'Davao del Sur', '8000'),
7     ('Groove Records', 'Antonio Cruz', 'antonio.cruz@grooverecords.com', '+63 956 789 0123', '203 Tempo Rd', 'Iloilo City', 'Iloilo', '5000');
```

SELECT \* FROM `suppliers`

Profiling

Edit inline

Edit

Explain SQL

Create PHP code

Refresh

Show all

Number of rows: 25

Filter rows: Search this table

Sort by key: None

Extra options

	supplier_id	company_name	contact_name	contact_email	contact_phone	address	city	state	zip_code
<input type="checkbox"/> Edit Copy Delete	1	Music World	Carlos Mendoza	carlos.mendoza@musicworld.com	+63 912 345 678	321 Harmony St	Manila	NCR	1000
<input type="checkbox"/> Edit Copy Delete	2	Beat Records	Luz Ramirez	luz.ramirez@beatrecords.com	+63 923 456 789	654 Melody Ave	Quezon City	NCR	1100
<input type="checkbox"/> Edit Copy Delete	3	Sound Shop	Rafael Santos	rafael.santos@soundshop.com	+63 934 567 890	987 Rhythm Blvd	Cebu City	Cebu	6000
<input type="checkbox"/> Edit Copy Delete	4	Vinyl Haven	Nina Reyes	nina.reyes@vinylhaven.com	+63 945 678 901	102 Bass St	Davao City	Davao del Sur	8000
<input type="checkbox"/> Edit Copy Delete	5	Groove Records	Antonio Cruz	antonio.cruz@grooverecords.com	+63 956 789 012	203 Tempo Rd	Iloilo City	Iloilo	5000

Insert data in table inventory

```
1 INSERT INTO inventory (album_id, supplier_id, quantity_in_stock, purchase_date, cost_price)
2 VALUES
3     (1, 1, 50, '2024-01-15', 1000.00),
4     (2, 2, 30, '2024-02-20', 2000.00),
5     (3, 3, 40, '2024-03-10', 3000.50),
6     (4, 4, 20, '2024-04-05', 4000.00),
7     (5, 5, 10, '2024-05-25', 5000.00);
```

SELECT \* FROM `inventory`

Profiling

Edit inline

Edit

Explain SQL

Create PHP code

Refresh

Show all

Number of rows: 25

Filter rows: Search this table

Sort by key: None

Extra options

	inventory_id	album_id	supplier_id	quantity_in_stock	purchase_date	cost_price
<input type="checkbox"/> Edit Copy Delete	6	1	1	50	2024-01-15	1000.00
<input type="checkbox"/> Edit Copy Delete	7	2	2	30	2024-02-20	2000.00
<input type="checkbox"/> Edit Copy Delete	8	3	3	40	2024-03-10	3000.50
<input type="checkbox"/> Edit Copy Delete	9	4	4	20	2024-04-05	4000.00
<input type="checkbox"/> Edit Copy Delete	10	5	5	10	2024-05-25	5000.00

Insert data in table employees

```
1 INSERT INTO Employees (first_name, last_name, email, phone_number, hire_date, position)
2 VALUES
3     ('Andres', 'Luna', 'andres.luna@gmail.com', '+63 912 345 6789', '2023-06-01', 'Sales Associate'),
4     ('Maria', 'Gonzalez', 'maria.gonzalez@gmail.com', '+63 923 456 7890', '2022-09-15', 'Store Manager'),
5     ('Luis', 'Martinez', 'luis.martinez@gmail.com', '+63 934 567 8901', '2024-01-20', 'Inventory Specialist'),
6     ('Ella', 'Santos', 'ella.santos@gmail.com', '+63 945 678 9012', '2023-11-05', 'Customer Service Representative'),
7     ('Rafael', 'Dela Cruz', 'rafael.delacruz@gmail.com', '+63 956 789 0123', '2023-08-30', 'Marketing Coordinator');
```

SELECT \* FROM `employees`

Profiling

[\[ Edit inline \]](#)[\[ Edit \]](#)[\[ Explain SQL \]](#)[\[ Create PHP code \]](#)[\[ Refresh \]](#)

☐ Show all

Number of rows: 25

Filter rows:

Sort by key: None

Extra options

	employee_id	first_name	last_name	email	phone_number	hire_date	position
<input type="checkbox"/> Edit Copy Delete	1	Andres	Luna	andres.luna@gmail.com	+63 912 345 678	2023-06-01	Sales Associate
<input type="checkbox"/> Edit Copy Delete	2	Maria	Gonzalez	maria.gonzalez@gmail.com	+63 923 456 789	2022-09-15	Store Manager
<input type="checkbox"/> Edit Copy Delete	3	Luis	Martinez	luis.martinez@gmail.com	+63 934 567 890	2024-01-20	Inventory Specialist
<input type="checkbox"/> Edit Copy Delete	4	Ella	Santos	ella.santos@gmail.com	+63 945 678 901	2023-11-05	Customer Service Representative
<input type="checkbox"/> Edit Copy Delete	5	Rafael	Dela Cruz	rafael.delacruz@gmail.com	+63 956 789 012	2023-08-30	Marketing Coordinator

Insert data in the table sales

```
1 INSERT INTO sales (customer_id, employee_id, sale_date, total_amount, album_id)
2 VALUES
3     (1, 2, '2024-01-15', 1500.00, 1),
4     (2, 3, '2024-02-20', 2000.00, 2),
5     (3, 4, '2024-03-10', 1750.00, 3),
6     (4, 5, '2024-04-05', 2200.00, 4),
7     (5, 1, '2024-05-25', 1800.00, 5);
```

SELECT \* FROM `sales`

Profiling

[\[ Edit inline \]](#)[\[ Edit \]](#)[\[ Explain SQL \]](#)[\[ Create PHP code \]](#)[\[ Refresh \]](#)

☐ Show all

Number of rows: 25

Filter rows:

Sort by key: None

Extra options

	sale_id	customer_id	employee_id	sale_date	total_amount	album_id
<input type="checkbox"/> Edit Copy Delete	1	1	2	2024-01-15	1500.00	1
<input type="checkbox"/> Edit Copy Delete	2	2	3	2024-02-20	2000.00	2
<input type="checkbox"/> Edit Copy Delete	3	3	4	2024-03-10	1750.00	3
<input type="checkbox"/> Edit Copy Delete	4	4	5	2024-04-05	2200.00	4
<input type="checkbox"/> Edit Copy Delete	5	5	1	2024-05-25	1800.00	5



Insert data in the table payments

```
1 INSERT INTO payments (sale_id, customer_id, payment_date, amount, payment_method)
2 VALUES
3     (1, 1, '2024-01-20', 1500.00, 'Cash'),
4     (2, 2, '2024-02-15', 2000.00, 'Credit Card'),
5     (3, 3, '2024-03-10', 1750.00, 'Debit Card'),
6     (4, 4, '2024-04-05', 2200.00, 'Bank Transfer'),
7     (5, 5, '2024-05-25', 1800.00, 'Credit Card');
```

SELECT \* FROM `payments`

☐ Profiling

[ Edit inline ]

[ Edit ]

[ Explain SQL ]

[ Create PHP code ]

[ Refresh ]

☐ Show all

Number of rows: 25

Filter rows: Search this table

Sort by key: None

Extra options

	payment_id	sale_id	customer_id	payment_date	amount	payment_method
<input type="checkbox"/> Edit Copy Delete	6	1	1	2024-01-20	1500.00	Cash
<input type="checkbox"/> Edit Copy Delete	7	2	2	2024-02-15	2000.00	Credit Card
<input type="checkbox"/> Edit Copy Delete	8	3	3	2024-03-10	1750.00	Debit Card
<input type="checkbox"/> Edit Copy Delete	9	4	4	2024-04-05	2200.00	Bank Transfer
<input type="checkbox"/> Edit Copy Delete	10	5	5	2024-05-25	1800.00	Credit Card

Insert data in the table purchases

```
1 INSERT INTO Purchases (album_id, quantity, purchase_date, total_cost)
2 VALUES
3     (1, 10, '2024-01-10', 15000.00),
4     (2, 5, '2024-02-15', 10000.00),
5     (3, 8, '2024-03-20', 14000.00),
6     (4, 12, '2024-04-05', 26400.00),
7     (5, 7, '2024-05-25', 12600.00);
```

SELECT \* FROM `purchases`

Profiling

Edit inline

Edit

Explain SQL

Create PHP code

Refresh

Show all

Number of rows: 25

Filter rows: Search this table

Sort by key: None

Extra options

					purchase_id	album_id	quantity	purchase_date	total_cost
<input type="checkbox"/>	Edit	Copy	Delete		1	1	10	2024-01-10	15000.00
<input type="checkbox"/>	Edit	Copy	Delete		2	2	5	2024-02-15	10000.00
<input type="checkbox"/>	Edit	Copy	Delete		3	3	8	2024-03-20	14000.00
<input type="checkbox"/>	Edit	Copy	Delete		4	4	12	2024-04-05	26400.00
<input type="checkbox"/>	Edit	Copy	Delete		5	5	7	2024-05-25	12600.00

### Insert data in the table returns

```

1 INSERT INTO Returns (sale_id, return_date, reason)
2 VALUES
3     (1, '2024-01-25', 'Defective item'),
4     (2, '2024-02-28', 'Wrong album received'),
5     (3, '2024-03-15', 'Not as described'),
6     (4, '2024-04-10', 'Duplicate purchase'),
7     (5, '2024-05-30', 'Customer changed mind');

```

SELECT \* FROM `returns`

Profiling

Edit inline

Edit

Explain SQL

Create PHP code

Refresh

Show all

Number of rows: 25

Filter rows: Search this table

Sort by key: None

Extra options

					return_id	sale_id	return_date	reason
<input type="checkbox"/>	Edit	Copy	Delete		1	1	2024-01-25	Defective item
<input type="checkbox"/>	Edit	Copy	Delete		2	2	2024-02-28	Wrong album received
<input type="checkbox"/>	Edit	Copy	Delete		3	3	2024-03-15	Not as described
<input type="checkbox"/>	Edit	Copy	Delete		4	4	2024-04-10	Duplicate purchase
<input type="checkbox"/>	Edit	Copy	Delete		5	5	2024-05-30	Customer changed mind

**6. Documentation: Make a Data Dictionary that lists each table, all the columns for that table, the data types for each column**

Customer Table	
Column	Type
customer_id	INT(11)
first_name	VARCHAR(50)
last_name	VARCHAR(50)
email	VARCHAR(100)
phone_number	VARCHAR(15)
address	VARCHAR(255)
city	VARCHAR(50)
state	VARCHAR(50)
zip_code	VARCHAR(10)
album_id	INT(11)

Suppliers Table	
Column	Type
supplier_id	INT
company_name	VARCHAR(100)

contact_name	VARCHAR(50)
contact_email	VARCHAR(100)
contact_phone	VARCHAR(15)
address	VARCHAR(255)
city	VARCHAR(50)
state	VARCHAR(50)
zip_code	VARCHAR(10)
album_id	INT(11)

Albums Table	
Column	Type
album_id	INT
title	VARCHAR(100)
artist	VARCHAR(100)
release_year	YEAR
genre	VARCHAR(50)
price	DECIMAL(10, 2)
rarity	ENUM('Common', 'Rare', 'Very Rare')

Inventory Table	
Column	Type
inventory_id	INT
album_id	INT
supplier_id	INT
quantity_in_stock	INT
purchase_date	DATE
cost_price	DECIMAL(10, 2)

Employees Table	
Column	Type
employee_id	INT
first_name	VARCHAR(50)
last_name	VARCHAR(50)
email	VARCHAR(100)
phone_number	VARCHAR(15)
hire_date	DATE

position	VARCHAR(50)
----------	-------------

Sales Table	
Column	Type
sale_id	INT
customer_id	INT
employee_id	INT
sale_date	DATE
total_amount	DECIMAL(10, 2)

Returns Table	
Column	Type
return_id	INT
sale_id	INT
return_date	DATE
reason	TEXT



Purchases Table	
Column	Type
purchase_id	INT
album_id	INT
quantity	INT
purchase_date	DATE
total_cost	DECIMAL(10, 2)

Payments Table	
Column	Type
payment_id	INT
sale_id	INT
customer_id	INT
payment_date	DATE
amount	DECIMAL(10, 2)
payment_method	ENUM ('Cash', 'Debit Card', 'Bank Transfer')