

NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL

(AN INSTITUTE OF NATIONAL IMPORTANCE)



E – COMMERCE MANAGEMENT

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INTRODUCTION

An ecommerce database is a crucial component of any successful online business, providing a structured and organized system for storing and managing essential data. The main purpose of an ecommerce database is to facilitate efficient and effective management of product information, customer data, and transactional information, thereby enabling seamless customer interactions and business operations.

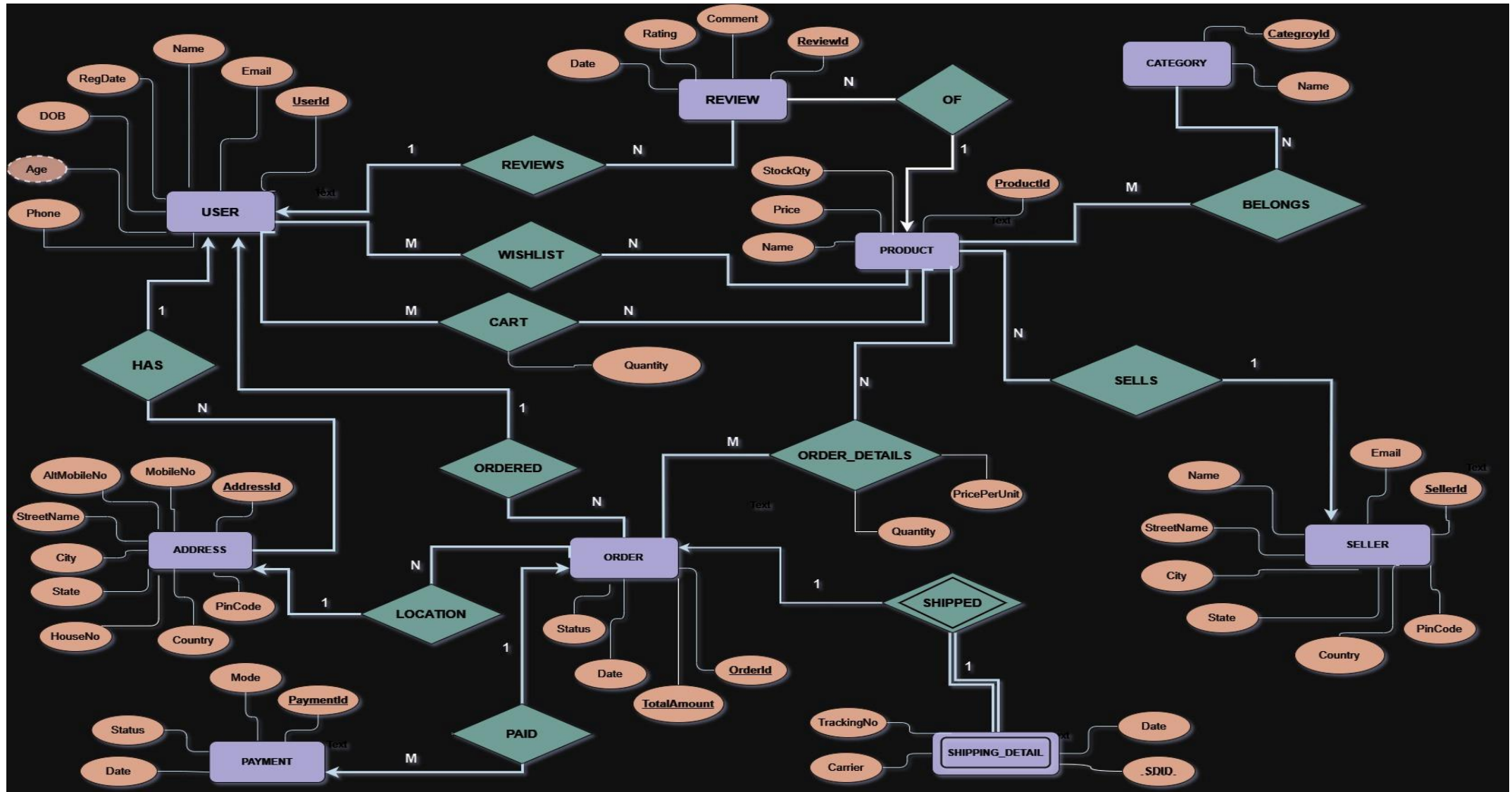
In today's booming e-commerce landscape, efficient data management is crucial. This project tackles that challenge by designing and building a robust database for an online store. We'll create a comprehensive schema to handle products, customers, orders, etc. By leveraging SQL, we'll enable efficient data retrieval and manipulation. This project lays the foundation for a fully functional e-commerce platform, giving us valuable insights into best practices for e-commerce database management.

We aim to design and implement an ecommerce database that can handle the complex data requirements of an online store. This includes organizing data in a coherent structure to keep track of inventories, updating product catalogs, and managing transactions.

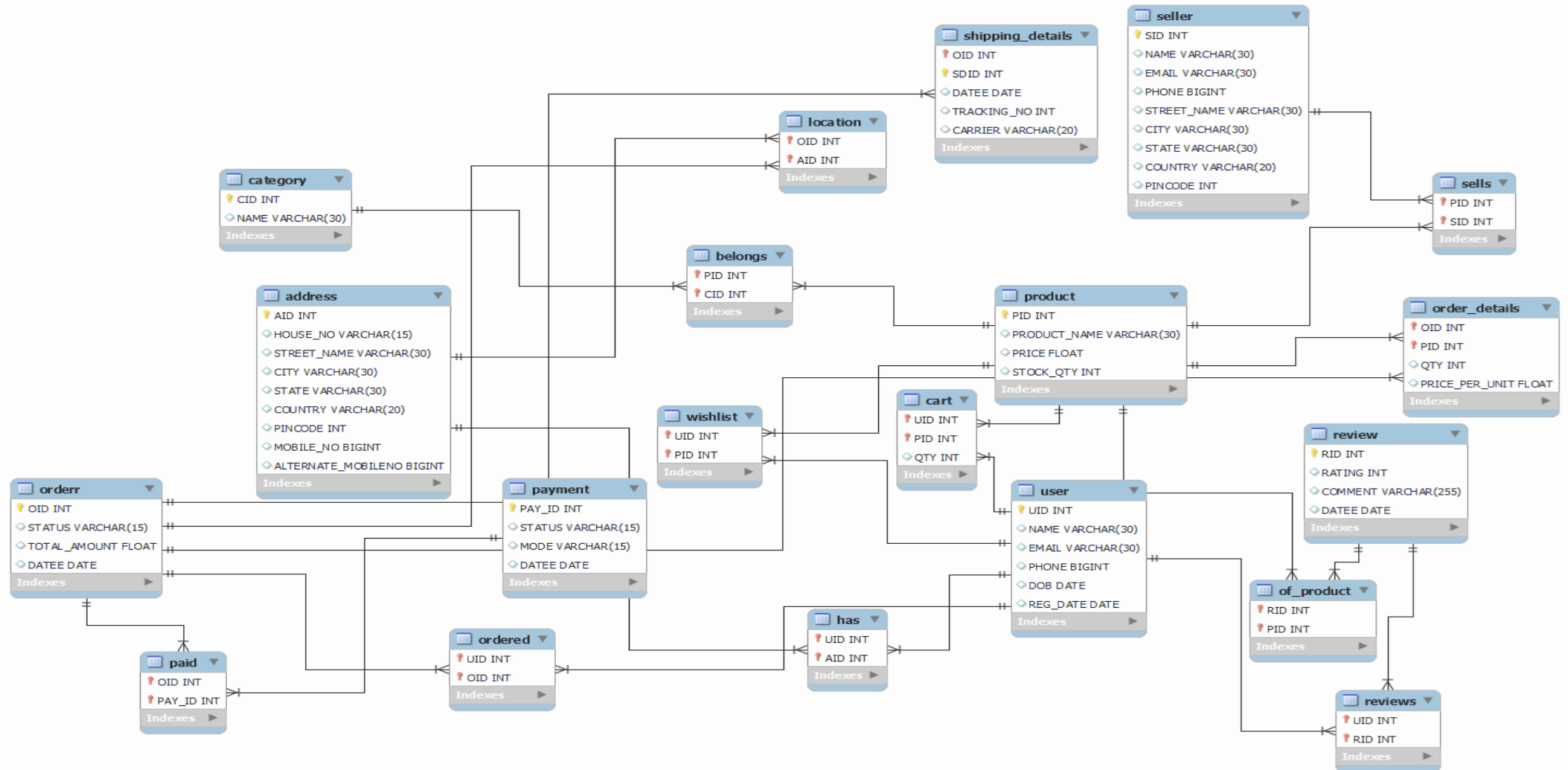
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ER DIAGRAM



RELATIONAL MODEL



ER MODEL ASSUMPTIONS AND KEY POINTS

1. User can have multiple addresses. User to address is one to many relationship.
2. Multiple users can review for same product and one user can review many products. User and review have many to many relationship.
3. Price of products may change later so Price at time of order is added to order details relation.
4. Order and Payment has one to one relationship.
5. User can have multiple orders, so user and order have one to many relationship.
6. A seller can sell many products, but each product can be sold by one seller.
7. One product can have many reviews, but each review is for one product.
8. One product belongs to one category, but one category can have many products.
9. Multiple users can add multiple items in cart and wish list. User can also add quantity for cart.
10. One shipping details belong to one order. Order and Shipping_details have one to one relationship.
11. Order and address have many to one relationship.

FUNCTIONAL DEPENDENCIES, PRIMARY KEY AND NORMALIZATION

➤ USER

UID → {NAME, EMAIL, PHONE, DOB, REG_DATE}

TAKING CLOSURE OF UID WE GET: (UID)⁺ → R

HENCE PRIMARY KEY IS → UID

NORMALIZATION

PRIME ATTRIBUTES → { UID }

NON-PRIME ATTRIBUTES → { NAME , EMAIL , PHONE , DOB , REG_DATE }

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ PRODUCT

PID → {PRODUCT_NAME, PRICE, STOCK_QTY}

TAKING CLOSURE OF PID WE GET: (PID)⁺ → R.

HENCE PRIMARY KEY IS → PID

NORMALIZATION

PRIME ATTRIBUTES → { PID }

NON-PRIME ATTRIBUTES → { PRODUCT_NAME, PRICE, STOCK_QTY }

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ PAYMENT

$\text{PAY_ID} \rightarrow \{\text{STATUS}, \text{MODE}, \text{DATEE}\}$

TAKING CLOSURE OF PAY_ID WE GET: $(\text{PAY_ID})^+ \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow \text{PAY_ID}$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{\text{PAY_ID}\}$

NON-PRIME ATTRIBUTES $\rightarrow \{\text{STATUS}, \text{MODE}, \text{DATEE}\}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ ORDERR

$\text{OID} \rightarrow \{\text{STATUS}, \text{TOTAL_AMOUNT}, \text{DATEE}\}$

TAKING CLOSURE OF OID WE GET: $(\text{OID})^+ \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow \text{OID}$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{\text{OID}\}$

NON-PRIME ATTRIBUTES $\rightarrow \{\text{STATUS}, \text{TOTAL_AMOUNT}, \text{DATEE}\}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ SHIPPING_DETAILS

$(OID, SDID) \rightarrow \{ DATEE, TRACKING_NO, CARRIER \}$

TAKING CLOSURE OF $(OID, SDID)$ WE GET: $(OID, SDID)^+ \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow (OID, SDID)$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{ OID, SDID \}$

NON-PRIME ATTRIBUTES $\rightarrow \{ DATEE, TRACKING_NO, CARRIER \}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ REVIEW

$RID \rightarrow \{ RATING, COMMENT, DATEE \}$

TAKING CLOSURE OF RID WE GET: $(RID)^+ \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow RID$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{ RID \}$

NON-PRIME ATTRIBUTES $\rightarrow \{ RATING, COMMENT, DATEE \}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ CATEGORY

$CID \rightarrow \{NAME\}$

TAKING CLOSURE OF CID, WE GET: $(CID)^+ \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow CID$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{CID\}$

NON-PRIME ATTRIBUTES $\rightarrow \{NAME\}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ SELLER

$SID \rightarrow \{NAME, EMAIL, PHONE, STREET_NAME, CITY, STATE, COUNTRY, PINCODE\}$

ON TAKING CLOSURE OF SID, WE GET: $-(SID)^+ \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow SID$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{SID\}$

NON-PRIME ATTRIBUTES $\rightarrow \{NAME, EMAIL, PHONE, STREET_NAME, CITY, STATE, COUNTRY, PINCODE\}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ ADDRESS

$AID \rightarrow \{ HOUSE_NO, STREET_NAME, CITY, STATE, COUNTRY, PINCODE, MOBILE_NO, ALTERNATE_MOBILENO \}$

TAKING CLOSURE OF AID, WE GET: - $(AID)^+ \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow AID$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{ AID \}$

NON-PRIME ATTRIBUTES $\rightarrow \{ HOUSE_NO, STREET_NAME, CITY, STATE, COUNTRY, PINCODE, MOBILE_NO, ALTERNATE_MOBILENO \}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ HAS

$(UID, AID) \rightarrow \{ \}$

TAKING CLOSURE OF (UID, AID) WE GET: - $(UID, AID)^+ \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow (UID, AID)$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{ UID, AID \}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ LOCATION

$(OID, AID) \rightarrow \{\}$

TAKING CLOSURE OF (OID, AID) WE GET: $(OID, AID)^+ \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow (OID, AID)$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{ OID, AID \}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ WISHLIST

$(UID, PID) \rightarrow \{\}$

ON TAKING CLOSURE OF (UID, PID) WE GET: $(UID, PID)^+ \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow (UID, PID)$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{ UID, PID \}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ CART

$(UID, PID) \rightarrow \{QTY\}$

ON TAKING CLOSURE OF (UID, PID) WE GET: $(UID, PID) + \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow (UID, PID)$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{UID, PID\}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ REVIEWS

$(UID, RID) \rightarrow \{\}$

ON TAKING CLOSURE OF (UID, RID) WE GET: $(UID, RID) + \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow (UID, RID)$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{UID, RID\}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ OF_PRODUCT

$(RID, PID) \rightarrow \{\}$

ON TAKING CLOSURE OF (RID, PID) WE GET: $(RID, PID) + \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow (RID, PID)$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{ RID, PID \}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ BELONGS

$(PID, CID) \rightarrow \{\}$

ON TAKING CLOSURE OF (PID, CID) WE GET: $(PID, CID) + \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow (PID, CID)$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{ PID, CID \}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ ORDER_DETAILS

$(OID, PID) \rightarrow \{QTY, PRICE_PER_UNIT\}$

ON TAKING CLOSURE OF (OID, PID) WE GET: $(OID, PID) + \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow (OID, PID)$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{OID, PID\}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ ORDERED

$(UID, OID) \rightarrow \{\}$

ON TAKING CLOSURE OF (UID, OID) WE GET: $(UID, OID) + \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow (UID, OID)$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{UID, OID\}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ SELLS

$(PID, SID) \rightarrow \{ \}$

ON TAKING CLOSURE OF (PID, SID) WE GET: $(PID, SID)^+ \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow (PID, SID)$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{ PID, SID \}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

➤ PAID

$(OID, PAY_ID) \rightarrow \{ \}$

ON TAKING CLOSURE OF (OID, PAY_ID) WE GET: $(OID, PAY_ID)^+ \rightarrow R$.

HENCE PRIMARY KEY IS $\rightarrow (OID, PAY_ID)$

NORMALIZATION

PRIME ATTRIBUTES $\rightarrow \{ OID, PAY_ID \}$

- THERE IS NO PARTIAL DEPENDENCY THEREFORE THE TABLE IS IN 2NF.
- THERE IS NO TRANSITIVE DEPENDENCY THEREFORE THE TABLE IS IN 3NF.
- ALL DEPENDENCIES ARE FROM THE CANDIDATE KEY THEREFORE THE TABLE IS IN BCNF.

CREATION OF TABLES

```
CREATE TABLE USER(  
    UID INT NOT NULL PRIMARY KEY,  
    NAME VARCHAR(30),  
    EMAIL VARCHAR(30),  
    PHONE BIGINT,  
    DOB DATE,  
    REG_DATE DATE  
);
```

```
CREATE TABLE PRODUCT(  
    PID INT NOT NULL PRIMARY KEY,  
    PRODUCT_NAME VARCHAR(30),  
    PRICE FLOAT,  
    STOCK_QTY INT  
);
```

```
CREATE TABLE PAYMENT(  
    PAY_ID INT NOT NULL PRIMARY KEY,  
    STATUS VARCHAR(15),  
    MODE VARCHAR(15),  
    DATEE DATE  
);
```

```
CREATE TABLE ORDERR(  
    OID INT NOT NULL PRIMARY KEY,  
    STATUS VARCHAR(15),  
    TOTAL_AMOUNT FLOAT,  
    DATEE DATE  
);
```

```
CREATE TABLE SHIPPING_DETAILS(  
    OID INT NOT NULL,  
    SDID INT NOT NULL,  
    DATEE DATE,  
    TRACKING_NO INT,  
    CARRIER VARCHAR(20),  
    FOREIGN KEY(OID) REFERENCES ORDERR(OID),  
    PRIMARY KEY(OID,SDID)  
);
```

```
CREATE TABLE CATEGORY(  
    CID INT NOT NULL PRIMARY KEY,  
    NAME VARCHAR(30)  
);
```

```
CREATE TABLE SELLER(  
    SID INT NOT NULL PRIMARY KEY,  
    NAME VARCHAR(30),  
    EMAIL VARCHAR(30),  
    PHONE BIGINT,  
    STREET_NAME VARCHAR(30),  
    CITY VARCHAR(30),  
    STATE VARCHAR(30),  
    COUNTRY VARCHAR(20),  
    PINCODE INT  
);
```

```
CREATE TABLE ADDRESS(  
    AID INT NOT NULL,  
    HOUSE_NO VARCHAR(15),  
    STREET_NAME VARCHAR(30),  
    CITY VARCHAR(30),  
    STATE VARCHAR(30),  
    COUNTRY VARCHAR(20),  
    PINCODE INT,  
    MOBILE_NO BIGINT,  
    ALTERNATE_MOBILENO BIGINT,  
    PRIMARY KEY (AID)  
);
```

```
CREATE TABLE HAS(  
    UID INT NOT NULL,  
    AID INT NOT NULL,  
    FOREIGN KEY(AID) REFERENCES ADDRESS(AID),  
    FOREIGN KEY(UID) REFERENCES USER(UID),  
    PRIMARY KEY(UID,AID)  
);
```

```
CREATE TABLE LOCATION(  
    OID INT NOT NULL,  
    AID INT NOT NULL,  
    FOREIGN KEY(OID) REFERENCES ORDERR(OID),  
    FOREIGN KEY(AID) REFERENCES ADDRESS(AID),  
    PRIMARY KEY(OID,AID)  
);
```

```
CREATE TABLE WISHLIST(  
    UID INT NOT NULL,  
    PID INT NOT NULL,  
    FOREIGN KEY(PID) REFERENCES PRODUCT(PID),  
    FOREIGN KEY(UID) REFERENCES USER(UID),  
    PRIMARY KEY(UID,PID)  
);
```

```
CREATE TABLE CART(  
    UID INT NOT NULL,  
    PID INT NOT NULL,  
    QTY INT,  
    FOREIGN KEY(PID) REFERENCES PRODUCT(PID),  
    FOREIGN KEY(UID) REFERENCES USER(UID),  
    PRIMARY KEY(UID,PID)  
);
```

```
CREATE TABLE REVIEWS(  
    UID INT NOT NULL,  
    RID INT NOT NULL,  
    FOREIGN KEY(UID) REFERENCES USER(UID),  
    FOREIGN KEY(RID) REFERENCES REVIEW(RID),  
    PRIMARY KEY(UID,RID)  
);
```

```
CREATE TABLE OF_PRODUCT(  
    RID INT NOT NULL,  
    PID INT NOT NULL,  
    FOREIGN KEY(PID) REFERENCES PRODUCT(PID),  
    FOREIGN KEY(RID) REFERENCES REVIEW(RID),  
    PRIMARY KEY(RID,PID)  
);
```

```
CREATE TABLE BELONGS(  
    PID INT NOT NULL,  
    CID INT NOT NULL,  
    FOREIGN KEY(CID) REFERENCES CATEGORY(CID),  
    FOREIGN KEY(PID) REFERENCES PRODUCT(PID),  
    PRIMARY KEY(PID,CID)  
);
```

```
CREATE TABLE ORDER_DETAILS(  
    OID INT NOT NULL,  
    PID INT NOT NULL,  
    QTY INT,  
    PRICE_PER_UNIT FLOAT,  
    FOREIGN KEY(PID) REFERENCES PRODUCT(PID),  
    FOREIGN KEY(OID) REFERENCES ORDERR(OID),  
    PRIMARY KEY(OID,PID)  
);
```

```
CREATE TABLE ORDERED(  
    UID INT NOT NULL,  
    OID INT NOT NULL,  
    FOREIGN KEY(UID) REFERENCES USER(UID),  
    FOREIGN KEY(OID) REFERENCES ORDERR(OID),  
    PRIMARY KEY(UID,OID)  
);
```

```
CREATE TABLE SELLS(  
    PID INT NOT NULL,  
    SID INT NOT NULL,  
    FOREIGN KEY(SID) REFERENCES SELLER(SID),  
    FOREIGN KEY(PID) REFERENCES PRODUCT(PID),  
    PRIMARY KEY(PID,SID)  
);  
  
CREATE TABLE PAID(  
    OID INT NOT NULL,  
    PAY_ID INT NOT NULL,  
    FOREIGN KEY(OID) REFERENCES ORDERR(OID),  
    FOREIGN KEY(PAY_ID) REFERENCES PAYMENT(PAY_ID),  
    PRIMARY KEY(OID,PAY_ID)  
);
```

DATA INSERTION

INSERT INTO USER VALUES

```
(1, 'Aarav Gupta', 'aarav@gmail.com', 1234567890, '1990-05-15', '2024-03-24'),
(2, 'Ayesha Patel', 'ayesha@gmail.com', 9876543210, '1995-08-20', '2024-03-24'),
(3, 'Ishaan Singh', 'ishaan@gmail.com', 4567891230, '1985-02-10', '2024-03-24'),
(4, 'Ananya Sharma', 'ananya@gmail.com', 7894561230, '2000-11-30', '2024-03-24'),
(5, 'Advik Verma', 'advik@gmail.com', 6543219870, '1978-07-25', '2024-03-24'),
(6, 'Diya Mishra', 'diya@gmail.com', 3219876540, '1992-04-05', '2024-03-24'),
(7, 'Aryan Tiwari', 'aryan@gmail.com', 8529637410, '1983-09-12', '2024-03-24'),
(8, 'Avani Yadav', 'avani@gmail.com', 3698521470, '1998-06-18', '2024-03-24'),
(9, 'Kabir Kumar', 'kabir@gmail.com', 1472583690, '1980-12-08', '2024-03-24'),
(10, 'Aadhya Singh', 'aadhya@gmail.com', 2581473690, '1993-03-22', '2024-03-24');
```

INSERT INTO CATEGORY VALUES

```
(1, 'Electronics'),
(2, 'Clothing'),
(3, 'Books'),
(4, 'Home & Kitchen'),
(5, 'Toys & Games'),
(6, 'Beauty & Personal Care'),
(7, 'Sports & Outdoors'),
(8, 'Automotive'),
(9, 'Health & Household'),
(10, 'Grocery'),
(11, 'Movies & TV'),
(12, 'Pet Supplies');
```

INSERT INTO SELLER VALUES

```
(1, 'ABC Electronics', 'abc@gmail.com', 9876543210, 'Main Street', 'New Delhi', 'Delhi', 'India', 110001),
(2, 'XYZ Clothing', 'xyz@gmail.com', 8765432109, 'Fashion Avenue', 'Mumbai', 'Maharashtra', 'India', 400001),
(3, 'Bookstore Online', 'books@gmail.com', 7654321098, 'Bookworm Lane', 'Bangalore', 'Karnataka', 'India', 560001),
(4, 'Home Essentials', 'home@gmail.com', 6543210987, 'Comfort Street', 'Chennai', 'Tamil Nadu', 'India', 600001),
(5, 'Toys Galore', 'toys@gmail.com', 5432109876, 'Playtime Road', 'Hyderabad', 'Telangana', 'India', 500001);
```

```
INSERT INTO ADDRESS (AID, HOUSE_NO, STREET_NAME, CITY, STATE, COUNTRY, PINCODE, MOBILE_NO, ALTERNATE_MOBILENO) VALUES
```

```

(1, '123', 'MG Road', 'Mumbai', 'Maharashtra', 'India', 400001,
912345678901, 919876543210),
(2, '456', 'Park Street', 'Kolkata', 'West Bengal', 'India', 700001,
919876543210, NULL),
(3, '789', 'Brigade Road', 'Bangalore', 'Karnataka', 'India', 560001,
945678123456, NULL),
(4, '1011', 'Indira Nagar', 'Chennai', 'Tamil Nadu', 'India', 600001,
912345678901, 917418529630),
(5, '1213', 'Sarjapur Road', 'Hyderabad', 'Telangana', 'India',
500001, 965432187654, NULL),
(6, '1415', 'Civil Lines', 'Delhi', 'Delhi', 'India', 110001,
932198765432, NULL),
(7, '1617', 'Cantt Area', 'Lucknow', 'Uttar Pradesh', 'India', 226001,
919852369741, NULL),
(8, '1819', 'Station Road', 'Ahmedabad', 'Gujarat', 'India', 380001,
942587963852, NULL),
(9, '2021', 'Gandhi Nagar', 'Jaipur', 'Rajasthan', 'India', 302001,
917258369147, NULL),
(10, '2223', 'Civil Lines', 'Pune', 'Maharashtra', 'India', 411001,
918745632198, NULL),
(11, '2425', 'Jubilee Hills', 'Visakhapatnam', 'Andhra Pradesh',
'India', 530001, 916325874563, NULL),
(12, '2627', 'Sector 17', 'Chandigarh', 'Chandigarh', 'India', 160001,
913254789632, NULL),
(13, '2829', 'Sector 22', 'Gurgaon', 'Haryana', 'India', 122001,
919852367415, NULL),
(14, '3031', 'Baner Road', 'Nagpur', 'Maharashtra', 'India', 440001,
917412589632, NULL),
(15, '3233', 'Chetak Circle', 'Jaipur', 'Rajasthan', 'India', 302001,
919852369147, NULL);

```

INSERT INTO PRODUCT (PID, PRODUCT_NAME, PRICE, STOCK_QTY) VALUES

-- Electronics

```

(1, 'LG Smart TV', 499.00, 50),
(2, 'Hp Laptop', 99899.00, 30),
(3, 'One Plus Nord 2', 33699.00, 100),
(4, 'Boat Headphones', 1149.00, 80),

```

-- Clothing

```

(5, 'Polo T-Shirt', 199.00, 200),
(6, 'Sparky Jeans', 3999.00, 150),
(7, 'Sparx Sneakers', 599.00, 80),

```

-- Books

```

(8, 'The Great Gatsby', 99.00, 300),
(9, 'Harry Potter and the Stone', 129.00, 250),
(10, 'To Kill a Mockingbird', 11.00, 200),

```

-- Home & Kitchen

```

(11, 'LG Blender', 3999.00, 100),
(12, 'Usha Cookware Set', 999.00, 80),
(13, 'LG Vacuum Cleaner', 1499.00, 70),

```

-- Toys & Games

```

(14, 'LEGO Classic Bricks', 299.00, 150),
(15, 'Monopoly Board Game', 198.00, 200),
(16, 'Barbie Doll', 149.00, 250),

```

-- Beauty & Personal Care

```

(17, 'Clinic Plus Shampoo', 7.00, 200),
(18, 'Ponds Facial Cleanser', 9.00, 180),
(19, 'Lakme Lipstick', 12.00, 150),
-- Sports & Outdoors
(20, 'Yoga Mat', 199.00, 150),
(21, 'Soccer Ball', 148.00, 200),
(22, 'Camping Tent', 997.00, 100),
-- Automotive
(23, 'Car Wax', 99.00, 200),
(24, 'Tire Pressure Gauge', 149.00, 180),
-- Health & Household
(25, 'Multivitamin Supplements', 29.00, 150),
(26, 'Hand Sanitizer', 4.00, 300),
-- Grocery
(27, 'Breakfast Cereal', 3.00, 300),
(28, 'Pasta', 1.00, 400),
-- Movies & TV
(29, 'The Godfather', 14.00, 100),
(30, 'Avengers: Endgame', 19.00, 120),
(31, 'The Shawshank Redemption', 9.00, 200),
-- Pet Supplies
(32, 'Dog Food', 19.00, 200),
(33, 'Cat Litter', 9.00, 250);

```

INSERT INTO WISHLIST (UID, PID) VALUES

```

(1,12),
(1,29),
(2,31),
(3,6),
(4,4),
(4,29),
(5,15),
(6,18),
(7,12),
(7,29),
(10,21),
(9,22);

```

INSERT INTO CART (UID, PID,QTY) VALUES

```

(1,12,2),(2,31,2),(3,6,1),
(4,12,1),(5,15,9),(7,12,3),
(7,29,4),(10,21,1),(9,22,1);

```

INSERT INTO REVIEW (RID, RATING, COMMENT, DATEE) VALUES

```

(1, 5, 'Great product! Excellent quality and performance.', '2023-05-10'),
(2, 4, 'Good value for money. Could be better with more features.', '2023-07-22'),
(3, 3, 'Average product. Not too impressed.', '2023-09-15'),
(4, 2, 'Disappointing purchase. Product did not meet expectations.', '2023-10-30'),
(5, 1, 'Terrible experience. Product arrived damaged.', '2023-12-05'),

```

```
(6, 5, 'Absolutely love it! Would highly recommend to others.', '2024-02-18'),
(7, 4, 'Satisfied with the purchase. Works as described.', '2024-03-10'),
(8, 3, 'Could be better. Not the best quality.', '2024-04-02'),
(9, 2, 'Not worth the price. Expected better performance.', '2024-05-15'),
(10, 1, 'Worst product ever. Broke within days of use.', '2024-06-28');
```

INSERT INTO REVIEWS (UID, RID) VALUES

```
(1, 1),
(1, 2),
(2, 3),
(2, 4),
(3, 5),
(3, 6),
(4, 7),
(5, 8),
(6, 9),
(7, 10);
```

INSERT INTO OF_PRODUCT (RID, PID) VALUES

```
(1, 1), (2, 1), (3, 2), (4, 3),
(5, 3), (6, 3), (7, 4),
(8, 5), (9, 6), (10, 7);
```

INSERT INTO HAS (UID, AID) VALUES

```
(1, 1), (1, 2),
(2, 3),
(3, 4), (3, 5), (3, 6),
(4, 7),
(5, 8), (5, 9),
(6, 10),
(7, 11),
(8, 12),
(9, 14), (9, 15),
(10, 13);
```

INSERT INTO BELONGS (PID, CID) VALUES

```
(1, 1), (2, 1), (3, 1), (4, 1), (5, 2),
(6, 2), (7, 2), (8, 3), (9, 3), (10, 3),
(11, 4), (12, 4), (13, 4), (14, 5), (15, 5),
(16, 5), (17, 6), (18, 6), (19, 6), (20, 7),
(21, 7), (22, 7), (23, 8), (24, 8), (25, 9),
(26, 9), (27, 10), (28, 10), (29, 11), (30, 11),
(31, 12), (32, 12);
```

INSERT INTO ORDERR (OID, STATUS, TOTAL_AMOUNT, DATEE) VALUES

```
(1, 'Pending', 133598, '2024-03-25'),
(2, 'Processing', 4327, '2024-03-26'),
```



```
(3, 'Shipped', 5997, '2024-03-27'),
(4, 'Delivered', 448, '2024-03-28'),
(5, 'Pending', 1149, '2024-03-29'),
(6, 'Processing', 1499, '2024-03-30'),
(7, 'Shipped', 397, '2024-03-31'),
(8, 'Delivered', 28, '2024-04-01'),
(9, 'Pending', 27, '2024-04-02'),
(10, 'Processing', 20, '2024-04-03'),
(11, 'Shipped', 347, '2024-04-04'),
(12, 'Delivered', 12, '2024-04-05'),
(13, 'Pending', 7, '2024-04-06'),
(14, 'Processing', 299, '2024-04-07'),
(15, 'Shipped', 1499, '2024-04-08');
```

```
INSERT INTO SHIPPING_DETAILS (OID,SDID,DATEE, TRACKING_NO, CARRIER)
VALUES
```

```
(3,1, '2024-03-25', 123456, 'Delhivery'),
(4,2, '2024-03-26', 234567, 'Bluedart'),
(7,3, '2024-03-27', 345678, 'Ekart'),
(8,4, '2024-03-28', 456789, 'Delhivery'),
(11,5, '2024-03-29', 567890, 'Bluedart'),
(12,6, '2024-03-30', 678901, 'Ekart'),
(15,7, '2024-03-31', 789012, 'Delhivery');
```

```
INSERT INTO ORDER_DETAILS (OID, PID, QTY, PRICE_PER_UNIT) VALUES
```

```
(1, 2, 1, 99899.00),
(1, 3, 1, 33699.00),
(2, 5, 1, 199.00),
(2, 6, 1, 3999.00),
(2, 9, 1, 129.00),
(3, 11, 1, 3999.00),
(3, 12, 2, 999.00),
(4, 14, 1, 299.00),
(4, 16, 1, 149.00),
(5, 4, 1, 1149.00),
(6, 13, 1, 1499.00),
(7, 23, 1, 99.00),
(7, 24, 2, 149.00),
(8, 30, 1, 19.00),
(8, 31, 1, 9.00),
(9, 31, 3, 9),
(10, 26, 5, 4),
(11, 20, 1, 199.00),
(11, 21, 1, 148.00),
(12, 19, 1, 12),
(13, 17, 1, 7),
(14, 14,1, 299.00),
(15, 13,1, 1499.00);
```

INSERT INTO PAYMENT (PAY_ID, STATUS, MODE, DATEE) VALUES

```
(1, 'Pending', 'Credit Card', '2024-03-25'),
(2, 'Completed', 'Debit Card', '2024-03-26')
(3, 'Completed', 'Cash', '2024-03-27'),
(4, 'Completed', 'UPI', '2024-03-28'),
(5, 'Pending', 'Bank Transfer', '2024-03-29'),
(6, 'Completed', 'Credit Card', '2024-03-30'),
(7, 'Completed', 'Debit Card', '2024-03-31'),
(8, 'Completed', 'Cash', '2024-04-01'),
(9, 'Pending', 'UPI', '2024-04-02'),
(10, 'Completed', 'Bank Transfer', '2024-04-03'),
(11, 'Completed', 'Credit Card', '2024-04-04'),
(12, 'Completed', 'Debit Card', '2024-04-05'),
(13, 'Pending', 'Cash', '2024-04-06'),
(14, 'Completed', 'UPI', '2024-04-07'),
(15, 'Completed', 'Bank Transfer', '2024-04-08');
```

INSERT INTO PAID(OID,PAY_ID) VALUES

```
(1,1),(2,2),(3,3),(4,4),
(5,5),(6,6),(7,7),(8,8),
(9,9),(10,10),(11,11),
(12,12),(13,13),(14,14),(15,15);
```

INSERT INTO SELLS (PID, SID) VALUES

```
(1,1),(2,1),(3,1),(4,2),
(5,2),(6,3),(7,3),(8,4),
(9,4),(10,5),(11,1),(12,2),
(13,2),(14,3),(15,3),(16,4),
(17,5),(18,5),(19,5),(20,1),
(21,2),(22,2),(23,3),(24,3),
(25,4),(26,5),(27,1),(28,2),
(29,1),(30,2),(31,2),(32,3);
```

INSERT INTO ORDERED(UID,OID) VALUES

```
(1,1),(1,2),
(2,3),
(3,4),(3,5),
(4,6),
(5,7),(5,8),(5,9),
(6,10),
(7,11),
(8,12),(8,15),
(9,13),
(10,14);
```

INSERT INTO LOCATION(OID,AID) VALUES

```
(1,1),(2,2),(3,3),
(4,5),(5,6),(6,7),
(7,8),(8,9),(9,8),
(10,10),(11,11),(12,12),
(13,14),(14,13),(15,12);
```

SNIPPETS OF DATA INSERTED

1.SELECT * FROM ADDRESS;

	AID	HOUSE_NO	STREET_NAME	CITY	STATE	COUNTRY	PINCODE	MOBILE_NO	ALTERNATE_MOBILENO
	1	123	MG Road	Mumbai	Maharashtra	India	400001	912345678901	919876543210
	2	456	Park Street	Kolkata	West Bengal	India	700001	919876543210	NULL
	3	789	Brigade Road	Bangalore	Karnataka	India	560001	945678123456	NULL
	4	1011	Indira Nagar	Chennai	Tamil Nadu	India	600001	912345678901	917418529630
	5	1213	Sarjapur Road	Hyderabad	Telangana	India	500001	965432187654	NULL
	6	1415	Civil Lines	Delhi	Delhi	India	110001	932198765432	NULL
	7	1617	Cannt Area	Lucknow	Uttar Pradesh	India	226001	919852369741	NULL
►	8	1819	Station Road	Ahmedabad	Gujarat	India	380001	942587963852	NULL
	9	2021	Gandhi Nagar	Jaipur	Rajasthan	India	302001	917258369147	NULL
	10	2223	Civil Lines	Pune	Maharashtra	India	411001	918745632198	NULL
	11	2425	Jubilee Hills	Visakhapat...	Andhra Prad...	India	530001	916325874563	NULL
	12	2627	Sector 17	Chandigarh	Chandigarh	India	160001	913254789632	NULL
	13	2829	Sector 22	Gurgaon	Haryana	India	122001	919852367415	NULL
	14	3031	Baner Road	Nagpur	Maharashtra	India	440001	917412589632	NULL
	15	3233	Chetak Circle	Jaipur	Rajasthan	India	302001	919852369147	NULL

2.SELECT * FROM USER;

	UID	NAME	EMAIL	PHONE	DOB	REG_DATE
►	1	Aarav Gupta	aarav@gmail.com	1234567890	1990-05-15	2024-03-24
	2	Ayesha Patel	ayesha@gmail.com	9876543210	1995-08-20	2024-03-24
	3	Ishaan Singh	ishaan@gmail.com	4567891230	1985-02-10	2024-03-24
	4	Ananya Sharma	ananya@gmail.com	7894561230	2000-11-30	2024-03-24
	5	Advik Verma	advik@gmail.com	6543219870	1978-07-25	2024-03-24
	6	Diya Mishra	diya@gmail.com	3219876540	1992-04-05	2024-03-24
	7	Aryan Tiwari	aryan@gmail.com	8529637410	1983-09-12	2024-03-24
	8	Avani Yadav	avani@gmail.com	3698521470	1998-06-18	2024-03-24
	9	Kabir Kumar	kabir@gmail.com	1472583690	1980-12-08	2024-03-24
	10	Aadhya Singh	aadhya@gmail.com	2581473690	1993-03-22	2024-03-24

3.SELECT * FROM SELLER;

	SID	NAME	EMAIL	PHONE	STREET_NAME	CITY	STATE	COUNTRY	PINCODE
▶	1	ABC Electronics	abc@gmail.com	9876543210	Main Street	New Delhi	Delhi	India	110001
	2	XYZ Clothing	xyz@gmail.com	8765432109	Fashion Avenue	Mumbai	Maharashtra	India	400001
	3	Bookstore Online	books@gmail.com	7654321098	Bookworm Lane	Bangalore	Karnataka	India	560001
	4	Home Essentials	home@gmail.com	6543210987	Comfort Street	Chennai	Tamil Nadu	India	600001
	5	Toys Galore	toys@gmail.com	5432109876	Playtime Road	Hyderabad	Telangana	India	500001

4.SELECT * FROM CATEGORY;

	CID	NAME
▶	1	Electronics
	2	Clothing
	3	Books
	4	Home & Kitchen
	5	Toys & Games
	6	Beauty & Personal Care
	7	Sports & Outdoors
	8	Automotive
	9	Health & Household
	10	Grocery
	11	Movies & TV
	12	Pet Supplies

5.SELECT * FROM SHIPPING_DETAILS;

	OID	SDID	DATEE	TRACKING_NO	CARRIER
▶	3	1	2024-03-25	123456	Delhivery
	4	2	2024-03-26	234567	Bluedart
	7	3	2024-03-27	345678	Ekart
	8	4	2024-03-28	456789	Delhivery
	11	5	2024-03-29	567890	Bluedart
	12	6	2024-03-30	678901	Ekart
	15	7	2024-03-31	789012	Delhivery

6.SELECT * FROM REVIEW;

	RID	RATING	COMMENT	DATEE
▶	1	5	Great product! Excellent quality and performance.	2023-05-10
	2	4	Good value for money. Could be better with mo...	2023-07-22
	3	3	Average product. Not too impressed.	2023-09-15
	4	2	Disappointing purchase. Product did not meet e...	2023-10-30
	5	1	Terrible experience. Product arrived damaged.	2023-12-05
	6	5	Absolutely love it! Would highly recommend to o...	2024-02-18
	7	4	Satisfied with the purchase. Works as described.	2024-03-10
	8	3	Could be better. Not the best quality.	2024-04-02
	9	2	Not worth the price. Expected better performa...	2024-05-15
	10	1	Worst product ever. Broke within days of use.	2024-06-28

7.SELECT * FROM PAYMENT;

	PAY_ID	STATUS	MODE	DATEE
▶	1	Pending	Credit Card	2024-03-25
	2	Completed	Debit Card	2024-03-26
	3	Completed	Cash	2024-03-27
	4	Completed	UPI	2024-03-28
	5	Pending	Bank Transfer	2024-03-29
	6	Completed	Credit Card	2024-03-30
	7	Completed	Debit Card	2024-03-31
	8	Completed	Cash	2024-04-01
	9	Pending	UPI	2024-04-02
	10	Completed	Bank Transfer	2024-04-03
	11	Completed	Credit Card	2024-04-04
	12	Completed	Debit Card	2024-04-05
	13	Pending	Cash	2024-04-06
	14	Completed	UPI	2024-04-07
	15	Completed	Bank Transfer	2024-04-08

8.SELECT * FROM ORDERR;

	OID	STATUS	TOTAL_AMOUNT	DATEE
►	1	Pending	133598	2024-03-25
	2	Processing	4327	2024-03-26
	3	Shipped	5997	2024-03-27
	4	Delivered	448	2024-03-28
	5	Pending	1149	2024-03-29
	6	Processing	1499	2024-03-30
	7	Shipped	248	2024-03-31
	8	Delivered	28	2024-04-01
	9	Pending	27	2024-04-02
	10	Processing	20	2024-04-03
	11	Shipped	347	2024-04-04
	12	Delivered	12	2024-04-05
	13	Pending	7	2024-04-06
	14	Processing	299	2024-04-07
	15	Shipped	1499	2024-04-08

9. SELECT * FROM PRODUCT;

	PID	PRODUCT_NAME	PRICE	STOCK_QTY
►	1	LG Smart TV	499	50
	2	Hp Laptop	99899	30
	3	One Plus Nord 2	33699	100
	4	Boat Headphones	1149	80
	5	Polo T-Shirt	199	200
	6	Sparky Jeans	3999	150
	7	Sparx Sneakers	599	80
	8	The Great Gatsby	99	300
	9	Harry Potter and the Stone	129	250
	10	To Kill a Mockingbird	11	200
	11	LG Blender	3999	100
	12	Usha Cookware Set	999	80
	13	LG Vacuum Cleaner	1499	70
	14	LEGO Classic Bricks	299	150
	15	Monopoly Board Game	198	200

	PID	PRODUCT_NAME	PRICE	STOCK_QTY
	16	Barbie Doll	149	250
	17	Clinic Plus Shampoo	7	200
	18	Ponds Facial Cleanser	9	180
	19	Lakme Lipstick	12	150
	20	Yoga Mat	199	150
	21	Soccer Ball	148	200
	22	Camping Tent	997	100
	23	Car Wax	99	200
	24	Tire Pressure Gauge	149	180
	25	Multivitamin Supplements	29	150
	26	Hand Sanitizer	4	300
	27	Breakfast Cereal	3	300
	28	Pasta	1	400
	29	The Godfather	14	100
	30	Avengers: Endgame	19	120

10. SELECT * FROM HAS;

UID	AID
1	1
1	2
2	3
3	4
3	5
3	6
4	7
5	8
5	9
6	10
7	11
8	12
10	13
9	14
9	15

11. SELECT * FROM LOCATION;

OID	AID
1	1
2	2
3	3
4	5
5	6
6	7
7	8
9	8
8	9
10	10
11	11
12	12
15	12
14	13
13	14

12. SELECT * FROM WISHLIST;

UID	PID
4	4
3	6
1	12
7	12
5	15
6	18
10	21
9	22
1	29
4	29
7	29
2	31

13. SELECT * FROM CART;

UID	PID	QTY
1	12	2
2	31	2
3	6	1
4	12	1
5	15	9
7	12	3
7	29	4
9	22	1
10	21	1

14. SELECT * FROM REVIEWS;

UID	RID
1	1
1	2
2	3
2	4
3	5
3	6
4	7
5	8
6	9
7	10

15. SELECT * FROM OF_PRODUCT;

RID	PID
1	1
2	1
3	2
4	3
5	3
6	3
7	4
8	5
9	6
10	7

16. SELECT * FROM BELONGS;

PID	CID
1	1
2	1
3	1
4	1
5	2
6	2
7	2
8	3
9	3
10	3
11	4
12	4
13	4
14	5
15	5
16	5
17	6
18	6
19	6
20	7
21	7
22	7
23	8
24	8
25	9
26	9
27	10
28	10
29	11
30	11
31	12
32	12

17. SELECT * FROM ORDER_DETAILS;

OID	PID	QTY	PRICE_PER_UNIT
1	2	1	99899
1	3	1	33699
2	5	1	199
2	6	1	3999
2	9	1	129
3	11	1	3999
3	12	2	999
4	14	1	299
4	16	1	149
5	4	1	1149
6	13	1	1499
7	23	1	99
7	24	2	149
8	30	1	19
8	31	1	9
9	31	3	9
10	26	5	4
11	20	1	199
11	21	1	148
12	19	1	12
13	17	1	7
14	14	1	299
15	13	1	1499

18. SELECT * FROM ORDERED;

UID	OID
1	1
1	2
2	3
3	4
3	5
4	6
5	7
5	8
5	9
6	10
7	11
8	12
9	13
10	14
8	15

19. SELECT * FROM SELLS;

PID	SID
1	1
2	1
3	1
11	1
20	1
27	1
29	1
4	2
5	2
12	2
13	2
21	2
22	2
28	2
30	2
31	2
6	3
7	3
14	3
15	3
23	3
24	3
32	3
8	4
9	4
16	4
25	4
10	5
17	5
18	5
19	5
26	5

20. SELECT * FROM PAID;

OID	PAY_ID
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15

SOME SQL QUERIES

1. Retrieve all products belonging to a specific category.

```
SELECT
Product.*
FROM
Product natural join Belongs natural join Category c
WHERE c.NAME = 'Electronics';
```

	PID	PRODUCT_NAME	PRICE	STOCK_QTY
▶	1	LG Smart TV	499	50
	2	Hp Laptop	99899	30
	3	One Plus Nord 2	33699	100
	4	Boat Headphones	1149	80

2. List all orders placed by a specific user.

```
SELECT
Orderr.OID,Orderr.STATUS,Orderr.Datee, Order_Details.QTY,
Product.PRODUCT_NAME, Order_Details.PRICE_PER_UNIT
FROM
Orderr natural join Order_details natural join Product
natural join Ordered
WHERE Ordered.UID = 5;
```

	OID	STATUS	Datee	QTY	PRODUCT_NAME	PRICE_PER_UNIT
▶	7	Shipped	2024-03-31	1	Car Wax	99
	7	Shipped	2024-03-31	2	Tire Pressure Gauge	149
	8	Delivered	2024-04-01	1	Avengers: Endgame	19
	8	Delivered	2024-04-01	1	The Shawshank Redemption	9
	9	Pending	2024-04-02	3	The Shawshank Redemption	9

3. Retrieve all products in a user's wishlist.

```
SELECT
Product.*
FROM
Product natural join Wishlist
WHERE Wishlist.UID = 1;
```

	PID	PRODUCT_NAME	PRICE	STOCK_QTY
▶	12	Usha Cookware Set	999	80
	29	The Godfather	14	100

4. Find the total number of reviews and average rating of a Product.

```
SELECT
COUNT(*) AS Total_Reviews, AVG(r.RATING) AS Avg_Rating
FROM
Review r natural join Of_product op
WHERE op.PID = 5;
```

	Total_Reviews	Avg_Rating
▶	1	3.0000

5. Retrieve all products in a user's cart

```
SELECT
Product.*
FROM
Product natural join Cart
WHERE Cart.UID=7;
```

	PID	PRODUCT_NAME	PRICE	STOCK_QTY
►	12	Usha Cookware Set	999	80
	29	The Godfather	14	100

6. List all orders with their shipping details and payment status.

```
SELECT
Orderr.*,Shipping_Details.TRACKING_NO,Shipping_Details.CARRIER,
Payment.STATUS AS Payment_Status
FROM
Orderr
LEFT JOIN Shipping_Details ON Orderr.OID = Shipping_Details.OID
JOIN Paid ON Orderr.OID = Paid.OID
JOIN Payment ON Paid.PAY_ID = Payment.PAY_ID;
```

	OID	STATUS	TOTAL_AMOUNT	DATEE	TRACKING_NO	CARRIER	Payment_Status
►	1	Pending	133598	2024-03-25	NULL	NULL	Pending
	2	Processing	4327	2024-03-26	NULL	NULL	Completed
	3	Shipped	5997	2024-03-27	123456	Delhivery	Completed
	4	Delivered	448	2024-03-28	234567	Bluedart	Completed
	5	Pending	1149	2024-03-29	NULL	NULL	Pending
	6	Processing	1499	2024-03-30	NULL	NULL	Completed
	7	Shipped	248	2024-03-31	345678	Ekart	Completed
	8	Delivered	28	2024-04-01	456789	Delhivery	Completed
	9	Pending	27	2024-04-02	NULL	NULL	Pending
	10	Processing	20	2024-04-03	NULL	NULL	Completed
	11	Shipped	347	2024-04-04	567890	Bluedart	Completed
	12	Delivered	12	2024-04-05	678901	Ekart	Completed
	13	Pending	7	2024-04-06	NULL	NULL	Pending
	14	Processing	299	2024-04-07	NULL	NULL	Completed
	15	Shipped	1499	2024-04-08	789012	Delhivery	Completed

7. Retrieve user and their addresses.

```
SELECT
User.UID, User.NAME, Address.*
FROM
User Natural Join has Natural Join Address;
```

	UID	NAME	AID	HOUSE_NO	STREET_NAME	CITY	STATE	COUNTRY	PINCODE	MOBILE_NO	ALTERNATE_MOBILENO
▶	1	Aarav Gupta	1	123	MG Road	Mumbai	Maharashtra	India	400001	912345678901	919876543210
	1	Aarav Gupta	2	456	Park Street	Kolkata	West Bengal	India	700001	919876543210	NULL
	2	Ayesha Patel	3	789	Brigade Road	Bangalore	Karnataka	Karnataka	560001	945678123456	NULL
	3	Ishaan Singh	4	1011	Indira Nagar	Chennai	Tamil Nadu	India	600001	912345678901	917418529630
	3	Ishaan Singh	5	1213	Sarjapur Road	Hyderabad	Telangana	India	500001	965432187654	NULL
	3	Ishaan Singh	6	1415	Civil Lines	Delhi	Delhi	India	110001	932198765432	NULL
	4	Ananya Sharma	7	1617	Cantt Area	Lucknow	Uttar Pradesh	India	226001	919852369741	NULL
	5	Advik Verma	8	1819	Station Road	Ahmedabad	Gujarat	India	380001	942587963852	NULL
	5	Advik Verma	9	2021	Gandhi Nagar	Jaipur	Rajasthan	India	302001	917258369147	NULL
	6	Diya Mishra	10	2223	Civil Lines	Pune	Maharashtra	India	411001	918745632198	NULL
	7	Aryan Tiwari	11	2425	Jubilee Hills	Visakhapat...	Andhra Prad...	India	530001	916325874563	NULL
	8	Avani Yadav	12	2627	Sector 17	Chandigarh	Chandigarh	India	160001	913254789632	NULL
	9	Kabir Kumar	14	3031	Baner Road	Nagpur	Maharashtra	India	440001	917412589632	NULL
	9	Kabir Kumar	15	3233	Chetak Circle	Jaipur	Rajasthan	India	302001	919852369147	NULL
	10	Aadhy Singh	13	2829	Sector 22	Gurgaon	Haryana	India	122001	919852367415	NULL

8. Retrieve all the product with its related category.

```
SELECT
Product.*, Category.NAME
FROM
Product Natural Join Belongs Natural Join Category;
```

PID	PRODUCT_NAME	PRICE	STOCK_QTY	NAME					
▶ 1	LG Smart TV	499	50	Electronics	16	Barbie Doll	149	250	Toys & G...
2	Hp Laptop	99899	30	Electronics	17	Clinic Plus Shampoo	7	200	Beauty & ...
3	One Plus Nord 2	33699	100	Electronics	18	Ponds Facial Cleanser	9	180	Beauty & ...
4	Boat Headphones	1149	80	Electronics	19	Lakme Lipstick	12	150	Beauty & ...
5	Polo T-Shirt	199	200	Clothing	20	Yoga Mat	199	150	Sports & ...
6	Sparky Jeans	3999	150	Clothing	21	Soccer Ball	148	200	Sports & ...
7	Sparx Sneakers	599	80	Clothing	22	Camping Tent	997	100	Sports & ...
8	The Great Gatsby	99	300	Books	23	Car Wax	99	200	Automotive
9	Harry Potter and the Stone	129	250	Books	24	Tire Pressure Gauge	149	180	Automotive
10	To Kill a Mockingbird	11	200	Books	25	Multivitamin Supplements	29	150	Health & ...
11	LG Blender	3999	100	Home & Ki...	26	Hand Sanitizer	4	300	Health & ...
12	Usha Cookware Set	999	80	Home & Ki...	27	Breakfast Cereal	3	300	Grocery
13	LG Vacuum Cleaner	1499	70	Home & Ki...	28	Pasta	1	400	Grocery
14	LEGO Classic Bricks	299	150	Toys & G...	29	The Godfather	14	100	Movies & TV
15	Monopoly Board Game	198	200	Toys & G...	30	Avengers: Endgame	19	120	Movies & TV
					31	The Shawshank Redemption	9	200	Pet Supplies
					32	Dog Food	19	200	Pet Supplies

9. How many orders each user has Ordered.

```
SELECT
User.UID,User.NAME,count(orderr.oid) as total_orders
FROM
User Natural Join Orderr
group by UID;
```

	UID	NAME	count(orderr.oid)
►	1	Aarav Gupta	2
	2	Ayesha Patel	1
	3	Ishaan Singh	2
	4	Ananya Sharma	1
	5	Advik Verma	3
	6	Diya Mishra	1
	7	Aryan Tiwari	1
	8	Avani Yadav	2
	9	Kabir Kumar	1
	10	Aadhya Singh	1

10. List all products sold by a particular seller.

```
SELECT
Seller.*,Product.pid, Product.product_name
FROM
Product Natural Join Sells Natural Join Seller
WHERE
SID=3;
```

	SID	NAME	EMAIL	PHONE	STREET_NAME	CITY	STATE	COUNTRY	PINCODE	pid	product_name
►	3	Bookstore Online	books@gmail.com	7654321098	Bookworm Lane	Bangalore	Karnataka	India	560001	6	Sparky Jeans
	3	Bookstore Online	books@gmail.com	7654321098	Bookworm Lane	Bangalore	Karnataka	India	560001	7	Sparx Sneakers
	3	Bookstore Online	books@gmail.com	7654321098	Bookworm Lane	Bangalore	Karnataka	India	560001	14	LEGO Classic Bricks
	3	Bookstore Online	books@gmail.com	7654321098	Bookworm Lane	Bangalore	Karnataka	India	560001	15	Monopoly Board Game
	3	Bookstore Online	books@gmail.com	7654321098	Bookworm Lane	Bangalore	Karnataka	India	560001	23	Car Wax
	3	Bookstore Online	books@gmail.com	7654321098	Bookworm Lane	Bangalore	Karnataka	India	560001	24	Tire Pressure Gauge
	3	Bookstore Online	books@gmail.com	7654321098	Bookworm Lane	Bangalore	Karnataka	India	560001	32	Dog Food

11. All products less than certain price in certain category

```
SELECT
Product.*,Category.NAME
FROM
Product Natural Join Belongs Natural Join Category
WHERE Product.PRICE<1000 and Category.NAME='Clothing';
```

	PID	PRODUCT_NAME	PRICE	STOCK_QTY	NAME
►	5	Polo T-Shirt	199	200	Clothing
	7	Sparx Sneakers	599	80	Clothing

12. All product more than certain average rating in certain category

```
SELECT
Product.*,Category.NAME,Avg(Review.Rating)
FROM
Product Natural Join Of_product Natural Join
Review Natural Join Belongs Natural Join Category
WHERE
Category.NAME='Electronics'
GROUP BY PID Having Avg(Review.Rating)>3;
```

	PID	PRODUCT_NAME	PRICE	STOCK_QTY	NAME	Avg(Review.Rating)
►	1	LG Smart TV	499	50	Electronics	4.5000
	4	Boat Headphones	1149	80	Electronics	4.0000



THANK YOU!