

◇ Q1

```
SELECT DISTINCT b.userid, u.name, u.email
FROM Buyer b
JOIN Users u ON b.userid = u.userid
JOIN Address a ON u.userid = a.userid;
```

☑ What it's doing:

- Fetches **only buyers** (Buyer b table).
- Connects them with their **user details** (Users u).
- Ensures they have at least one **address** (Address a).
- Uses **DISTINCT** → to prevent duplicates (because a buyer can have multiple addresses).

✗ If we did not use DISTINCT:

- Suppose Buyer **101** has 3 addresses → their userid, name, email would show **3 times**.
- That would make the result repetitive and messy.

? Why only DISTINCT and not GROUP BY?

- GROUP BY could also work, but we don't need to aggregate data here — we just want **unique rows**.
- DISTINCT is lighter and simpler when the goal is just **removing duplicates**.

◇ Q2

```
SELECT s.userid, u.name AS seller_name, st.sid, st.storeName
FROM Seller s
JOIN Users u ON s.userid = u.userid
JOIN Manage m ON s.userid = m.userid
JOIN Store st ON m.sid = st.sid;
```

☑ What it's doing:

- Finds all **sellers** and their **store(s)**.
- Uses multiple **JOINS** to link:
 - Seller → Users (to get seller details).
 - Seller → Manage → Store (to get stores they manage).

✗ If we did not use JOINS:

- We would not be able to combine info across tables.
- Example: If you only query Seller, you'd see just seller IDs, but not their names or stores.
- If you only query Store, you'd see stores but not *who manages them*.

? Why only JOIN and not Subquery?

- JOIN makes it efficient and cleaner since we are combining data row-by-row.
- A subquery could do the same, but would be longer, harder to read, and slower in big databases.

◇ Q3

```
SELECT p.pid, p.productName, p.price, b.brandName
FROM Product p
JOIN Brand b ON p.bid = b.bid
WHERE p.price > 20000;
```

☑ What it's doing:

- Shows **products** with their brand.
- Uses **WHERE p.price > 20000** to filter only expensive items.
- Joins Product with Brand so we see **brand names** instead of just bid.

✗ If we did not use WHERE:

- We'd get **all products**, including cheap ones (like a ₹200 pen or ₹1000 charger).
- The query would not answer the actual requirement of "greater than 20000".

✗ If we did not use JOIN:

- We'd see only product IDs with `bid` (brand ID), not the **brandName**.
- Example: Instead of “*iPhone – Apple*” you'd see “*iPhone – 1*” (just the brand ID).

Summary (Why each function is necessary)

- **DISTINCT** → avoids duplicate buyers (clean output).
- **JOIN** → essential to combine data from multiple related tables.
- **WHERE** → filters results to match conditions (like `price > 20000`).

Without them, results would either be **incomplete**, **messy**, or **not matching the question**.