* Function Dependency :-

(i) customer

Customer_id → F_name, L_name, DOB, mobile email, pan no, gender, Demat_acc_no, Demat_balance, Depository_Parti

mobile → email_id

(ii) IPO

→ IPO_ID → IPO_name, price_band, lot_size open_date, close_date, listing price

(iii) company

→ company_code → LTP, industry, market_cap, PLE, debt, cash, ROE, ROCE

(iv) Applied_detail

→ Customer_id, IPO_id → Applied_price, LOT, date, time

(v) Allocate_detail

→ Customer_id, IPO_id → issue_price

(vi) order_detail

→ customer_id, company_code → order_date, order_time, sell_date, buy_price, status

(vii) technical
→ company_code → LTP, LC, UC, 52_w_high, 52_w_low, 52_w_trend avg, delivery

(viii) Bank
→ Bank_acc_no → customer_id, acc_holder, bank_name, branch, IFSC

(IX) Demat_bal_details
→ transaction_id → customer_id, acc_no, date, time, type, amount remarks

Normalization

(i) Customer

→ FD's :

(i) customer_id → F_name, L_name, DoB, mobile_no, email, Pan_no, gender, Demat_acc_no, Demat_balance, Depo_partt.

(ii) mobile_no → email_id

→ given FD's set is in 1NF.

→ but it is not in 2NF and 3NF due to mobile_no → email_id

Hence, we have to do decomposition in our table

customer → customer

→ per (customer_id, mobile, email)

→ now both table's are in BCNF customer table is normalized.

(ii) IPO

→ FD :

IPO_ID → IPO_name, price_band, lot_size, open_date, close_date, Listing_price

→ this FD's is in 1NF because no multivalue their.

→ This is fully dependent table so that it is in 2NF also.

→ This is 3NF also because here no transitive

→ LHS is CK Hence it is in BCNF also.

(iii) Company

→ FD:

Company_code → LTP, industry, market_cap, PIE, debt, cash, ROE, ROCE

→ Their is no multivalue Dependency Hence it is in 1NF. Fully depent so 2NF also

→ Their is no transitive dependentcy such that it is in 3NF

→ left side of FD's is PK so that it is in BCNF.

(iv) Applied_detail

→ customer id, IPO_id → Applied_price, LOT, date, time

→ This is in 1NF because their is not any multivalue dependency. Also it is not show transitivity and particial Dependency such that it is in BCNF.

(v) Allocate Detail

→ customer_id, ipo_id → issue_price;

→ This table is in BCNF so no need to futhur normalize.

(vi) order_details

→ customer_id, company_code → order date, order_time, sell_date, buy_price, statys

→ this table is in BCNF so no need to futhur normalize

(vii) Technical

→ company_code → LTP, LC, UC, W_high, W-Low, W-trand, Avg, Delivery.

→ This table is in BCNF no need to furthur normalize.

(viii) Bank

→ Bank_acc_no → customerid, acc-holder bank_name, branch, IFSC

→ This table is in BCNF so that no need to normalize furthur.

(xi) demat_bal_detail

→ transction_id → customer_id, acc_no, date, time, type, amount, remarks

→ This table is in BCNF NO need to furthur normalize.