SQL – Portfólio e PnL (Supabase/Postgres)

Funções e views para cálculo de posições, custo médio e PnL.

# 1) Posição e Custo Médio (CMA)

CREATE OR REPLACE FUNCTION fn\_positions\_cma(p\_user uuid)  
RETURNS TABLE(symbol text, qty\_net numeric, avg\_cost\_brl numeric) AS $$  
WITH ops AS (  
 SELECT symbol,  
 SUM(CASE WHEN side='buy' THEN qty ELSE -qty END) AS qty\_net,  
 SUM(CASE WHEN side='buy' THEN qty\*price\_brl + fee\_brl ELSE 0 END) AS buy\_cost  
 FROM trades  
 WHERE user\_id = p\_user  
 GROUP BY symbol  
)  
SELECT symbol,  
 qty\_net,  
 CASE WHEN qty\_net > 0  
 THEN buy\_cost / NULLIF( (SELECT SUM(qty) FROM trades t WHERE t.user\_id=p\_user AND t.symbol=ops.symbol AND t.side='buy'), 0)  
 ELSE 0 END AS avg\_cost\_brl  
FROM ops;  
$$ LANGUAGE sql STABLE;

# 2) View de Posições Correntes

CREATE OR REPLACE VIEW v\_positions\_current AS  
SELECT p.symbol, p.qty\_net, p.avg\_cost\_brl  
FROM fn\_positions\_cma((SELECT id FROM users LIMIT 1)) p;

# 3) PnL Não Realizado (Snapshot de Preços)

CREATE OR REPLACE FUNCTION fn\_pnl\_cma(p\_user uuid, p\_prices jsonb)  
RETURNS TABLE(symbol text, qty numeric, avg\_cost\_brl numeric, mkt\_price\_brl numeric, pnl\_unrealized numeric) AS $$  
WITH pos AS (  
 SELECT \* FROM fn\_positions\_cma(p\_user)  
)  
SELECT  
 pos.symbol,  
 pos.qty\_net,  
 pos.avg\_cost\_brl,  
 (p\_prices ->> pos.symbol)::numeric AS mkt\_price\_brl,  
 ( (p\_prices ->> pos.symbol)::numeric - pos.avg\_cost\_brl ) \* pos.qty\_net AS pnl\_unrealized  
FROM pos;  
$$ LANGUAGE sql STABLE;

# 4) Observações

- As funções usam custo médio móvel (CMA) para simplicidade.  
- Para FIFO, implementar função específica (p.ex. fn\_pnl\_fifo) futuramente.  
- Todos os valores monetários em BRL (numeric(18,2)).