General Format of Inputs

R := inputfromfile(sales1) // import vertical bar delimited foo, first line // has column headers. // Suppose they are saleid|itemid|customerid|storeid|time|qty|pricerange // In general there can be more or fewer columns than this.

1. R1 := select(R, (time > 50) or (qty < 30))
   // select * from R where time > 50 or qty < 30
2. R2 := project(R1, saleid, qty, pricerange) // select saleid, qty, pricerange // from R1
3. R3 := avg(R1, qty) // select avg(qty) from R1
4. R4 := sumgroup(R1, time, qty) // select sum(time), qty from R1 group by qty
5. R5 := sumgroup(R1, qty, time, pricerange) // select sum(qty), time,

// pricerange from R1 group by time, pricerange
R6 := avggroup(R1, qty, pricerange) // select avg(qty), pricerange

// from R1 group by by pricerange
S := inputfromfile(sales2) // suppose column headers are

// saleid|I|C|S|T|Q|P
T := join(R, S, R.customerid = S.C) // select * from R, S

// where R.customerid = S.C

1. T1 := join(R1, S, (R1.qty > S.Q) and (R1.saleid = S.saleid)) // select * from R1, S w
2. T2 := sort(T1, S_C) // sort T1 by S_C

T2prime := sort(T1, R1_time, S_C) // sort T1 by R1_time, S_C (in that order)

3. T3 := movavg(T2prime, R1_qty, 3) // perform the three item moving average of T2prime

   // on column R_qty. This will be as long as R_qty with the three way

   // moving average of 4 8 9 7 being 4 6 7 8

4. T4 := movsum(T2prime, R1_qty, 5) // perform the five item moving sum of T2prime

   // on column R_qty

Q1 := select(R, qty = 5) // select * from R where qty=5 Btree(R, qty) // create an index on R based on column qty

// Equality selections and joins on R should use the index.

// All indexes will be on one column (both Btree and Hash) Q2 := select(R, qty = 5) // this should use the index

5

Q3 := select(R, itemid = 7) // select * from R where itemid = 7 Hash(R,itemid)
Q4 := select(R, itemid = 7) // this should use the hash index
Q5 := concat(Q4, Q2) // concatenate the two tables (must have the same schema)

// Duplicate rows may result (though not with this example). outputtofile(Q5, Q5) // This should output the table Q5 into a file

// with the same name and with vertical bar separators
outputtofile(T, T) // This should output the table T