

Exercise 3

1. HashMap hm1; HashMap hm2

A1: Populate hm1 with tuples from ScanBasedU

2. For all u in ScanBasedU:
3. hm1.insert(u.v,u);

A2: Filter and aggregate tuples from ScanBasedV

4. For all v in ScanBasedV:
5. if v.s >= 10 && v.s < 75:
6. avgD = calculateAverage(hm1.values(), u.d);
7. count = getCount(hm1.values());
8. aggregateTuple = Tuple(v.v, count, avgD);
9. hm2.insert(aggregateTuple.v, aggregatedTuple);

A3: Join operation using hm2

10. For all v in ScanBasedV:
11. if v.s >= 10 && v.s < 75:
12. matchingTuples = hm2.probe(v.v);
13. For all mt in matchingTuples:
14. Yield Tuple(mt.v, mt.count, mt.avgD);