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DBSCAN (SetOfPoints, Eps, MinPts)
// SetOfPoints is UNCLASSIFIED
ClusterId := nextId(NOISE);
FOR i FROM 1 TO SetOfPoints.size DO
    Point := SetOfPoints.get(i);
    IF Point.ClId = UNCLASSIFIED THEN
        IF ExpandCluster(SetOfPoints, Point, ClusterId, Eps, MinPts) THEN
            ClusterId := nextId(ClusterId)
        END IF
    END IF
END FOR
END; // DBSCAN

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ExpandCluster(SetOfPoints, Point, ClId, Eps, MinPts) : Boolean;

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    seeds:=SetOfPoints.regionQuery(Point,Eps);
    IF seeds.size<MinPts THEN // no core point
        SetOfPoint.changeClId(Point,NOISE);
        RETURN False;
    ELSE // all points in seeds are density-reachable from Point
        SetOfPoints.changeClIds(seeds,ClId);
        seeds.delete(Point);
        WHILE seeds <> Empty DO
            currentP := seeds.first();
            result := SetOfPoints.regionQuery(currentP, Eps);
            IF result.size >= MinPts THEN
                FOR i FROM 1 TO result.size DO
                    resultP := result.get(i);
                    IF resultP.ClId IN {UNCLASSIFIED, NOISE} THEN
                        IF resultP.ClId = UNCLASSIFIED THEN
                            seeds.append(resultP);
                        END IF;
                        SetOfPoints.changeClId(resultP,ClId);
                    END IF; // UNCLASSIFIED or NOISE
                END FOR;
            END IF; // result.size >= MinPts
            seeds.delete(currentP);
        END WHILE; // seeds <> Empty
        RETURN True;
    END IF
END; // ExpandCluster

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