**Module 3. Assembling the bipartite D-DP graph**

/\* The most obvious way for assembling the D-DP bipartite graph consists of simply retrieving the the D-DP *2*-tuples from ps2mim2hpo. However, as in ps2mim2hpo some mim D belong to more PS, for ease of analysis, we discard these pluri\_PS D. \*/

/\* First, identify the D that belong to more PS. \*/

CREATE TABLE tmp1(mim\_id INT, ps4mim INT);

INSERT INTO tmp1

SELECT DISTINCT \* FROM(

SELECT mim\_id, COUNT(DISTINCT ps\_id) AS ps4mim FROM ps2mim2hpo

GROUP BY mim\_id ORDER BY ps4mim DESC, mim\_id ASC)

WHERE ps4mim > 1;

/\* Then, with this information, assemble the bipartite D-DP graph. \*/

CREATE TABLE **bipartite**(ps\_id TEXT, mim\_id INT, hpo\_id TEXT, ic REAL, ps\_name TEXT, hpo\_name TEXT, pluri\_ps INT);

INSERT INTO bipartite

SELECT DISTINCT \* FROM(

SELECT l.\*, r.mim\_id FROM ps2mim2hpo l

LEFT JOIN tmp1 r ON (l.mim\_id = r.mim\_id)

);

/\* Delete the rows of bipartite that contain the D with multiple PS annotations. \*/

UPDATE bipartite SET pluri\_ps = 1 WHERE pluri\_ps IS NOT NULL;

UPDATE bipartite SET pluri\_ps = 0 WHERE pluri\_ps IS NULL;

DELETE FROM bipartite WHERE pluri\_ps = 1;

.once c:/SQLITE/LHPS/outputs/bipartite.txt

SELECT DISTINCT \* FROM(SELECT mim\_id, hpo\_id, ic FROM bipartite);

DROP TABLE tmp1;