## Objective

This task is aimed at constructing the hierarchy structure for Northern Ireland Census areas

The major hierarchy of Northern Ireland census are:

* Northern Ireland (NI)
  + Local Government Districts (LGD)
    - Settlements (Settlements)
    - District Electoral Area (DEA)
      * Wards (WD)
      * Super Data Zones (SDZ)
        + Data Zones (DZ)

## Materials and tools

Materials required are all under the folder [Projects\CADP\2021\Northern Ireland\Geography handling](https://jisc365.sharepoint.com/:f:/r/sites/dcrd/UKDS/Documents/Projects/CADP/2021/Northern%20Ireland/Geography%20handling?csf=1&web=1&e=TcaVrh)

* The main workbook ([2021\_NISRA\_geography\_areas\_working\_book.xlsx](https://jisc365.sharepoint.com/:x:/r/sites/dcrd/UKDS/Documents/Projects/CADP/2021/Northern%20Ireland/Geography%20handling/2021_NISRA_geography_areas_working_book.xlsx?d=w3b260bb5cbbf44f783ea4037ad0e32b8&csf=1&web=1&e=IylGvs))
* The Data Zones to LGD lookup ([geography-data-zone-and-super-data-zone-lookups.xlsx](https://jisc365.sharepoint.com/:x:/r/sites/dcrd/UKDS/Documents/Projects/CADP/2021/Northern%20Ireland/Geography%20handling/reference%20file/geography-data-zone-and-super-data-zone-lookups.xlsx?d=w61888f9175434b66988270ee3ad5940a&csf=1&web=1&e=ESIV3Y))
* The Wards to LGD lookup ([Lookup-Table-Ward2014-to-DEA2014-to-LGD2014.ods](https://jisc365.sharepoint.com/:x:/r/sites/dcrd/UKDS/Documents/Projects/CADP/2021/Northern%20Ireland/Geography%20handling/reference%20file/Lookup-Table-Ward2014-to-DEA2014-to-LGD2014.ods?d=wae3b400575f54c0397c8a0e34736b528&csf=1&web=1&e=y4KdZ1))

*Caution:* The Data Zones to LGD lookup also contains a layer called **settlement**, that needs to be handled as well.

## Task

1. Extract a non-duplicated (sorted by code) list per each geography levels
2. Follow the above major hierarchy, put each geography level list into a single file
3. Use the two lookup files to find each geography items corresponding parents  
   Example:  
   on lookup table you can find this:  
   A screenshot of a computer

   Description automatically generated  
   this represents   
   N20000011 having a parent of N21000004  
   N21000004 having a parent of N10000104  
   N10000104 having a parent of N09000001  
   and all LGD are having a parent of “Northern Ireland” (N92000002)
4. Finalise the full list with the 4 columns (code, name, parent\_code, geography\_grouping\_id)