

C17 – Lab Experience: Working with Sets - Nations of the World

1. Download the Dataset

- Obtain the four text files from [GitHub](#):
 - xcountry.txt (Country names)
 - xcapital.txt (Capital cities)
 - xlanguages.txt (Languages spoken)
 - xcurrency.txt (Currencies used)
- Save these files in the local directory: C:/temp.

2. Define the Nation Structure

- Create a Nation structure with the following attributes:
 - Country name
 - Capital city
 - Languages spoken
 - Currency
- Overload the < operator for ordering nations.
- Implement a print() method to display a nation's information in the format:
Name: XXXXX
Capital: YYYYY
Language: ZZZZ
Currency: MMMM

3. Read and Process Data

- Read data from the four text files and construct Nation objects.
- Store these objects in a vector<Nation> container named db.

4. Create Language-Based Sets

- Construct a set<Nation> named **enset**, containing nations where English is spoken.
- Construct a set<Nation> named **spset**, containing nations where Spanish is spoken.
- Create set<Nation> **enspset**, representing nations where both English and Spanish are spoken.

5. Identify Italian-Speaking Nations

- Create the set<Nation> itset, containing countries where Italian is spoken.
- Create set<Nation> **enitset**, representing nations where both English and Italian are spoken.

(<https://github.com/vmatosecc/datasets/nations>)