The Relational Database Schema of the Mondial Database

(Table schemas are listed in alphabetical order.)

Airport (Information about airports)
   iatacode: the IATA code of the airport
   name: the name of the airport
   country: the country code where the airport is located
   city: in case the airport is associated with a city, the name of the city
   province: the province where the city belongs to
   island: if it is located on an island, the name of this island
   latitude: geographic latitude
   longitude: geographic longitude
   elevation: the elevation (above sea level) of the city
   gmtOffset: the GMT offset of the local time

City (Information about cities)
   name: the name of the city
   country: the code of the country where it belongs to
   province: the name of the province where it belongs to
   population: population of the city
   elevation: the elevation (above sea level) of the city
   latitude: geographic latitude
   longitude: geographic longitude

CityLocalName (Information about the local name of the city)
   city: the name of the city
   province: the name of the province
   country: the code of the country where it belongs to
   localname: the local name, usually in a local alphabet (UTF-8)

Citypops (Information about the population number of the cities in different years)
   city: the name of the city
   province: the name of the province
   country: the code of the country where it belongs to
   population: number of inhabitants
   year: in which year

Continent (Information about continents)
   name: name of the continent
   area: total area of the continent

Country (Information about the countries (and similar areas) of the world with some data)
   name: the country name
   code: the country code
   capital: the name of the capital
   province: the province where the capital belongs to
   area: the total area
   population: the population number

CountryLocalName (Information about the local name of the country)
   country: the country code
   localname: the local name, usually in a local alphabet (UTF-8)

Countrypops (Information about the population number of the countries in different years)
   country: the country code
   population: number of inhabitants
   year: in which year

Desert (Information about deserts)
   name: the name of the desert
   area: the total area of the desert
   coordinates: its geographical coordinates as (latitude, longitude)

Economy (Economical information about the countries)
   country: the country code
   GDP: gross domestic product (in million $)
   agriculture: percentage of agriculture of the GDP
   service: percentage of services of the GDP
   industry: percentage of industry of the GDP
   inflation: inflation rate (per annum)
   unemployment: unemployment rate

EthnicGroup (Information about the ethnic groups in a country
   country: the country code
   name: name of the ethnic group
   percentage: percentage of the ethnic group in this country

Island (Information about islands)
   name: the name of the island
   islands: the group of islands where it belongs to
   area: the area of the island
   elevation: the maximal elevation of the island
   type: the type of the island, e.g. volcanic, coral, atoll, ...
   coordinates: its geographical coordinates as (latitude, longitude)

Lake (Information about lakes)
   name: the name of the lake
   area: the total area of the lake
   depth: the depth of the lake
   elevation: the elevation (above sea level) of the lake
   river: the river that flows out of the lake (may be null)
   type: the type of the lake, e.g., salt, caldera, ...
   coordinates: its geographical coordinates as (latitude, longitude)

LakeOnIsland (Information which lakes are located on islands)
   lake: the name of the lake
   island: the name of the island

Language (Information about the languages spoken in a country
   country: the country code
   name: name of the language
   percentage: percentage of the language in this country

Mountain (Information about mountains
   name: the name of the mountain
   mountains: the mountains where the it belongs to
   elevation: the maximal elevation of the summit of the mountain
   type: the type of the mountain, e.g. volcanic, (active) volcano, ...
   coordinates: its geographical coordinates as (latitude, longitude)

MountainOnIsland (Information which mountains are located on islands)
   mountain: the name of the mountain
   island: the name of the island

Organization (Information about political and economic organizations)
   name: the full name of the organization
   abbreviation: its abbreviation
   city: the city where the headquarters are located
   country: the code of the country where the headquarters are located
   province: the name of the province where the headquarters are located
   established: date of establishment

Politics (Political information about the countries)
   country: the country code
   independence: date of independence (if independent)
   wasdependent: the political body where the area was dependent of; usually a country (but not always)
   dependent: the country code where the area belongs to
   government: type of government

Population (Information about the population of the countries)
   country: the country code
   population growth: population growth rate (per annum)
   infant mortality: infant mortality (per thousand)

Province (Information about administrative divisions)
   name: the name of the administrative division
   country: the country code where it belongs to
   area: the total area of the province
   population: the population of the province
   capital: the name of the capital
   capprov: the name of the province where the capital belongs to

Note that *capprov* is not necessarily equal to *name*. E.g., the municipality of Bogota (Colombia) is a province of its own, and Bogota is also the capital of the surrounding province Cundinamarca.

ProvinceLocalName (Information about the local name of the province)
   province: the name of the province
   country: the code of the country where it belongs to
   localname: the local name, usually in a local alphabet (UTF-8)

Provpops (Information about the population number of the provinces in different years)
   province: the name of the province
   country: the code of the country where it belongs to
   population: number of inhabitants
   year: in which year

Religion (Information about the religions in a country)
   country: the country code
   name: name of the religion
   percentage: percentage of the religion in this country

River (Information about rivers)
   name: the name of the river
   length: the length of the river
   area: the size of its catchment area
   river: the river where it finally flows to
   lake: the lake where it finally flows to
   sea: the sea where it finally flows to
   source: the coordinates of its source
   sourceElevation: the elevation (above sea level) of its source
   mountains: the mountains where its source is located
   estuary: the coordinates of its estuary
   estuaryElevation: the elevation (above sea level) of its estuary

   Note that at most one out of {*river*, *lake*, *sea*} can be non-null.

RiverOnIsland (Information which rivers are located on islands)
   river: the name of the river
   island: the name of the island

RiverThrough (Information about rivers flowing through lakes)
   river: the name of the river
   lake: the lake where it flows through

Sea (Information about seas)
   name: the name of the sea
   depth: the maximal depth of the sea
   area: the total area of the sea

borders (Information about neighboring countries. Note that in this relation, for every pair of neighboring countries (A,B), only one tuple is given – thus, the relation is not symmetric)
   country1: a country code
   country2: a country code
   length: length of the border between country1 and country2

encompasses (Information to which continents a country belongs)
   country: the country code
   continent: the continent name
   percentage: percentage, how much of the area of a country belongs to the continent

geo_Mountain (Geographical information about mountains)
   mountain: the name of the mountain
   country: the country code where it is located
   province: the province of this country

   Note that for a country there can be several provinces where the mountain is located in. Similar tables are available for *geo_island*, *geo_desert*, *geo_river*, *geo_lake*, and *geo_sea*. Further, there are also *geo_source* and *geo_estuary*.

isMember (memberships in political and economic organizations)
   organization: the abbreviation of the organization
   country: the code of the member country
   type: the type of membership

islandIn (Information the waters where the islands are located in)
   island:the name of the island
   sea: the sea where the island is located in
   lake: the lake where the island is located in
   river: the river where the island is located in

   Note that an island can have coasts to several seas.

located (Information about cities located at rivers, lakes, and seas)
   city: the name of the city
   country: the country code where the city belongs to
   province: the province where the city belongs to
   river: the river where it is located at
   lake: the lake where it is located at
   sea: the sea where it is located at

   Note that for a given city, there can be several lakes/seas/rivers where it is located at.

locatedOn (Information about cities located in islands)
   city: the name of the city
   country: the country code where the city belongs to
   province: the province where the city belongs to
   island: the island it is (maybe only partially) located on

   Note that for a given city, there can be several islands where it is located on.

mergesWith (Information about neighboring seas. Note that in this relation, for every pair of neighboring seas (A,B), only one tuple is given – thus, the relation is not symmetric)
   sea1: a sea
   sea2: a sea