CS316
Group 0: ExtendPower
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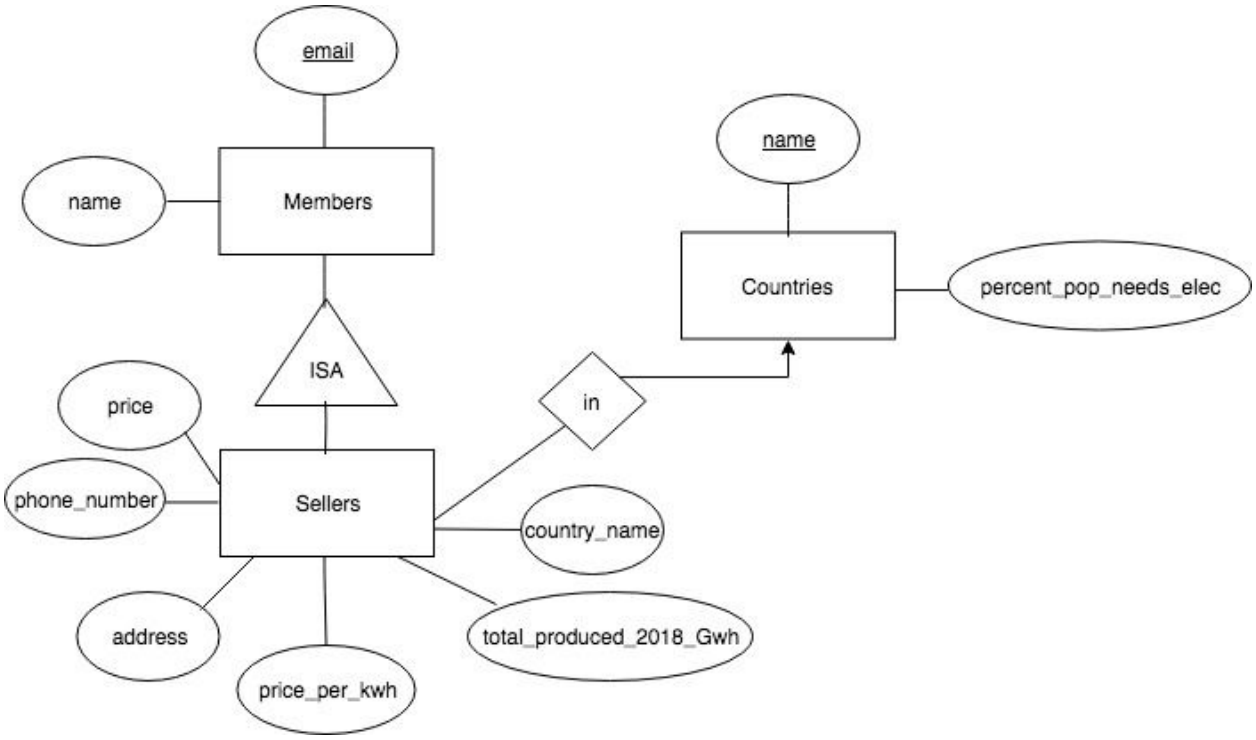
Final Project Report

Application Description

There's a huge unmet energy demand in Africa. In East Africa, energy needs met across the countries average to less than 40%. Most energy needs are met by governments and the sources are not renewable. However, there are private sources that can provide energy to homes and small-scale industries. This platform connects private energy sellers to buyers and helps buyers find alternative energy sources near them. People selling electricity can add themselves to the database, and people looking for sources of electricity can search for sources in their area and price range.

ER Diagram and Schema:



Members(email, name)
Sellers(email, phone_number, country_name, total_produced_2018_Gwh, address, price_per_kwh)
Countries(name, percent_population_needs_elec)

Members don't have listings and just have an email and name, with email as a key. Countries have a name and the percentage of the population without electricity in the country, with name

as a key. Seller extends Members - it has an email, name, phone number, address, and country of the seller, the price per kwh that they're selling electricity for, and the total electricity they produced in 2018.

Assumptions:

A seller only sells electricity at one price in exactly one country though people do not have to be in that country to buy it. Energy is always electricity. Any new sellers are from countries already in the database.
Data Assumptions: All data was collected from the African Energy portal. We assumed that the data was correct and up to date.