Homework 3 Solar Power Africa
Due Tuesday September 15, 2020

Determine the viability of a simple solar light manufactured in Ethiopia.

There are many online sources for the design of a solar light. For example
https://www.youtube.com/watch?v=8earltsP35w   and
https://www.youtube.com/watch?v=VyZM4pEWG3o .
(https://www.mikrocontroller.net/attachment/158139/QX5252.pdf)

1) Compare these designs with existing products such as the following NGO:
https://www.indiegogo.com/projects/unite-to-light-solar-usb-charger-led-light#/
which will be offered for $15 in the developing world and is manufactured in China.
or the $50 Panasonic solar lantern for the developing world
https://news.panasonic.com/global/stories/2013/24710.html

2) Try to find the approximate cost of the design given on the first webpage by searching at Mouser.com https://www.mouser.com or just search on Amazon or ebay

3) Consider the logistics of setting up manufacturing, marketing and distribution for an Ethiopian solar light/cell phone charger system and give a crude assessment of the viability of manufacturing these devices in Ethiopia for the Ethiopian market. You could use an ASSIC chip as described in the second youtube, or just components as described in the second youtube (or other youtubes you can find).

   This should include an estimated cost, availability of parts, and technical knowhow that would be required. You can assume that your Ethiopian peers have equivalent technical knowledge but that they are risk adverse, that is they don't like to or would never pick up a screwdriver and see how the thing works.

4) Consider the option of purchasing the solar lights in China and shipping them to Ethiopia and just giving them away as in the Indiegogo site. What impact is being made in the different approaches?