1. Identify the problem clearly – Why is electricity being wasted? Who is affected?
   - ***According to the scenario that was stated, the problem why electricity is being wasted is because of the lack of managing electrical usage in appliances and practices of minimizing electrical consumption. As stated above, "students forget to unplug their devices, leave lights or fans on when going out, and use appliances inefficiently." Which concludes us to the problem of lack of practical management of maintaining electrical consumption and usage of appliances.***

2. Research – Look up common causes of high electricity usage and existing solutions (like smart plugs, timers, reminder apps, etc.).
   - ***According to my research, similarly to the scenario above that was stated, the common cause of having high electricity consumption is due to the inefficient use of appliances, using AC as an alternative when fans are enough to satisfy the hot weather. AC is known to be equivalent to the power consumption of 11 fans. Thus, it is one of the reasons why our watts usage is high in meralco bills whenever we use ACs. Other reasons are the lack of practical management of unplugging appliances and turning off unnecessary lights. Which contributes to why our electrical usage keeps increasing. Even if the appliances are turned off, IF it is still plugged in, it still consumes electricity.***
   - ***In my research in looking towards the possible solutions for lessening the electrical consumption, I have stumbled upon the same solutions that were mentioned in the example, such as the smart plugs, Solar Panel, Reminder App, Timer, On and Off Extension Cords.***

3. Specify requirements.
   - ***Solar panels => are quite costly, but it is very effective in controlling electrical consumption and easy to use yet, too strict on maintenance.***
   - ***Smart Plugs => suffices all requirements, but it is not very efficient and may be a little bit costly given that it only supports 1 cord extension.***

- ***Reminder app => free app, easy to use but It may not be very effective given that it is manually maintained in terms of electrical consumption.***
- ***Timer => Same with the reminder app, but doesn't focus on what is being notified in terms of electrical consumption, but more likely on how long it is being used.***
- ***Extension Cords with on/off button => suffices all requirements, affordable, easy to use with just a button, and very effective and efficient in terms of controlling electrical consumption.***

4. Brainstorm 3 solutions
   - ***Smart plugs => are one of the IoT devices that communicate via local or internet networking. This allows connected loads to be switched on and off remotely and often include monitoring functions for on/off times, power consumption, and usage patterns.***
   - ***Timers => are not very efficient but this is one practical way to keep track of how long your appliances have been plugged in and how long they have been on, such as in AC, TV, and charged devices.***
   - ***Extension Cord with On/Off Button => With this, it suffices all requirements; affordability, easy to use and very effective & efficient in terms of electrical consumption and on controlling plugged appliances with 1 button.***

5. Choose the best solution and justify your answer.
   - ***The usage of extension cords and a practice in electrical consumption in lights. These are the best solutions in managing and are mostly supported in all requirements. Not just requirements, but also in terms of flexibility and efficiency. Extension cords are easier to manage and to monitor all plugged appliances. It's affordable, easy to use, and very efficient and effective in turning off all plugged appliances in just 1 off button. Additionally, "extension cords" also helps in flexibility, where it increases the length range in wherever you want to plug in when the main outlet is too far.***
   - ***In terms of the practice in electrical consumption in lights, I do not really recommend using solar, since it requires a heavy duty maintenance and it violates one of the requirements, which was the "affordability." Practicing turning off lights when necessary is just the best example to learn as to lessen the electrical consumption. Not only it saves you electricity, but also it saves you on spending***

on solutions such as solar, that requires maintenance, installment, and only charges in sun.

6. Create a prototype or model: (Flowchart)