Eco Smart City – Algorithm

1. Generate random values for the city demand between a range of two numbers
2. Create a class for the energy sources
3. Create dictionary for energy sources to track their energy levels. This has to be done for hydroelectric power, solar panels and wind turbines
4. Set the total energy at 0.0MW as all sources will start from 0 MW
5. Define the calculation of total energy which will be the addition of the source's energy levels
6. Define the addition and removal of energy to be able add and remove energy from sources and recalculates the total
7. Create an instance for the energy sources class and initialise the total energy variable
8. Define the addition and removal of energy by getting selected sources and adding or removing the energy input by user into choice
9. Define the update of total energy by checking the energy and the demand of energy and displaying the total energy added from all sources
10. Check the energy vs the demand of energy the city needs. Energy is calculated by adding all of the sources together and city demand is given by random
11. View the statistics by displaying all the energy from sources, the total energy produced and the city demand
12. Create the GUI
13. Run the programs main event loop