GROUP 7
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The City of Life in Electronics

The whole thing that we did in electronics this semester can be compared to a busy city, where information and data travel from one place to another at an instant through some media. The whole breadboard can be thought of as a small city, where several infrastructures are essential for the proper transportation of the necessary information.

As a start, let us first describe our city, or the breadboard. The buildings and other structures in our city must be ordered and placed in their proper places and must have their necessary building permits from the city administrator's office. This is to ensure safety in our breadboard. As much as we don't want any accident or unnecessary incidents in our cities, we also do not want our breadboard to be a smoke-emitter, just like what happened to some groups.

Electrical companies run our cities nowadays. These electrical companies supply the much-needed power so as to make everything in our city work. Simply put, the whole city depends on Meralco, for instance. Like Meralco, our power supply makes things possible for our electrical components. Without a power supply, the things that we put in the circuit would be all useless.

Now, our cities have roads and highways. Similarly, our breadboards have interconnected holes for the transportation of information. If a road is not connected to another, then no information is transferred or exchanged. To ensure safety and efficiency, we must be like the MMDAs and arrange all the roads in our breadboards.

Now, let me introduce you to our components. First is the 555 IC. You don't have to memorize their names, just remember the concept. You may think of the 555 as the Big Ben in our city. It is our city clock, to which everyone must work with accordingly. Every action in our city must be in accordance with this timer. Or else, you won't have a proper schedule for the exchange of information.

Our cities also have boundaries and we may think of them as the gates in electronics. We have to make sure that we secure our place from invaders. Now, we have different gates like the AND, OR, NAND, and NOR. In our AND gate, if you enter by pair or in a group, all of you must be a citizen to be granted entrance. If one of you is not a citizen, then all of you are not allowed to enter for not following instructions. In the second gate (OR), it is expected that at least one of you is a citizen for all of you to be granted permission to enter the city. Our NAND gate is for the tourists who have been familiar with the city and do not need guides. To be able to enter, all of you must be tourists. Lastly, our NOR gates is for the tourists with guides. They may carry with them citizens, as long as there is a tourist with them.

Next is our LEDs or our light-emitting diodes. These are our lighthouses. They work efficiently if given proper power supply and works only for some conditions. We also have our

light-dependent resistor with the photo-diode, which can be viewed as our street lampposts. They light up during times of darkness and cease to light during the bright days.

Another component is the 7-segment display diode. This can be viewed as our local television networks. It may, or sometimes due to censorship may not display the outputs of what's happening in the city.

Now, we have our resistors, which impede the flow of electricity. It may be viewed as the traffic jams in our cities that cause slow transportation and exchange of information. Now, just like the stars that guide our cities at night, we know their values through their colors. Different color combinations yield different values. Just like in our cities, we also need some traffic jams but not too much lest information would never travel.

Our potentiometers can be seen as our traffic enforcers, who control the traffic jams in our cities. They can control the impedance, try to lower or increase them.

Lastly, we have our transistors and Op-Amps, our other friendly neighbors who help us perform our tasks efficiently, and accurately.

Our cities need cooperation and unity from all the things found there, may it be buildings, houses, schools, people, animals, objects, in order to function well and attain prosperity and progress. Like the city, our electrical components must also work hand in hand, and perform each duty well so as to ensure proper functioning of the whole thing.