ABSTRACT

Indonesia is a country with a fairly high population level as it is proven that Indonesia is in the top 4 countries with a very large population in the world. With a very large population, Indonesia certainly has a plenty of problems, one of the problem is garbage management. Garbage is inseparable things from humans and can also cause a harmful effects on health if not managed properly. In this environmental sanitation problem, there are many problems found such as garbage bins that are fully loaded but not immediately removed by the janitor, either careless from the janitor or a lack of cleaning staff members so when that garbage is fully loaded is not immediately removed, or the janitor already has a schedule for picking up trash and waiting for it to be completely full, so as to save costs and energy. However, the consequences for some of these reasons can cause environmental pollution if the garbage that is already fully loaded and being left for too long. This problem is very important to be considered in order to create a clean, comfortable and healthy environment.

Smart trash bin based on IoT is a technological innovation that can notify the janitor if the trash bin is already fully loaded. Which is this innovation designed using various sensors such as ultrasonic sensors for garbage heights and load cell sensors to detect weight. So the janitor can find out how much the height and weight of the trash bin in each house. Then it will notify the janitor if the trash bin is fully loaded through the android application. The aim of this innovation of smart trash bin based on the internet of things is to be able to provide solutions of the problems listed above, which is to help the janitors in carrying out their work in collecting garbage that is already fully loaded in their region, so as to save costs and energy.

So that the results obtained from these innovations can make it easier for janitors to carry out their work, and also can save costs and energy from the innovation of this smart trash bin based on the internet of things.

Keywords: *garbage, ultrasonic, loadcell, internet of things*