**Progressive Education Society’s**

**Project ID:** A8

**Modern College of Engineering, Pune-411005**

**Department of Electronics and Telecommunication**

T**.E. E & TC -2021-22**

**Project Title**: Dry/ Wet Garbage Segregation and Monitoring

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**Objective:**  To implement Garbage Segregation System which segregates Dry And Wet Garbage.

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| **Methodology:**   * When the object (waste) is placed on the plank one by one IR sensor detects the object. * Depending upon the type of object(wet /dry) placed on the plank, moisture sensor detects whether the object is wet or dry. * If the object contains moisture then servo motor send object into the Left Chamber. * If the object does not contains any moisture then servo motor send object into the Right Chamber. * Ultrasonic sensor is use to measure the junk level of both the chamber. * LCD display will show the remaining space in Chamber (in %) and count of objects put in both the chamber. | **Block Diagram :** | **Flowchart:** |  | |
| **Testing & Debugging:**  1.At first time servo motor was not rotating enough to take large size of garbage samples. So, we increased the rotation in servo by code implementation.  2.For moisture detection and smooth surface for sliding we added aluminum foil to the surface . | **Specifications / Features:**   1. Atmega328 microcontroller:32KB of programmable FLASH; 1KB of EEPROM, voltage:1.8 – 5.5V. 2. 16x2 LCD Display: Model Number ST/16x2Y 3. Infrared Sensor: Model number S.ELECT044 4. Ultrasonic Sensor: Voltage: 5V(DC), Detection Distance: 2 cm to 450 cm. 5. Servo Motor: Operating speed:0.12second/ 60degree ( 4.8V no load). Stall Torque (4.8V): 17.5oz /in (1kg/cm) 6. Buzzer: voltage 12V | **Results:** | |  | |

* **Conclusion:** Automatic Waste Segregator System is successfully implemented for the separation of waste into dry and wet waste at a domestic level.