### TASK-15 DESIGN THINKING BOARD

# PRODUCT: SMART WASTE BIN WITH RECYCLING GUIDANCE AMBIGUOUS PROBLEM:

Users like this waste bin product but they are suffering from the differentiate between the recyclable and non recyclable wastes and improve the speed of recycleable material in the smart bin



#### Users:

- 1)Households: they are used in home because they keep used products in that bin
- **2)Office workers:** they also kept in the offices to throw the used products in it
- 3)muncipal workers: they also use this bin to collect the used products in areas and cities to keep clean
- **4)Recycling companies:** the companies also a user of this smart bin because it helps them so much in recycling the used product

#### DEFINE

HOW CAN DIFFERENTIATE BETWEEN
THE RECYCLABLE AND NON
RECYCLABLE WASTES ?AND HOW CAN
WE IMPROVE THE SPEED OF
RECYCLABLE MATERIAL IN THE SMART
BIN?

#### IDEATE

#### **BRAINSTROM SOLUTIONS:**

- 1.Using the sensors to detect the used products type like plastic ,paper, steel Etc
- 2.And upgrading it know the difference between the recyclable waste or non recyclable waste
- 3 .By using the AI ,it helps us to separete the waste based upon its categoroy like it should seperate the wastes into their categoroy 4. By using the upgraded technology we can easily convert the waste and recycle it fastly
- 5.We use two storaging boxes in the product to store the dry and wet waste in it . and it helps to do not mix the wet and dry waste in it .

#### PROTOTYPE

### I HAVE CREATED A PROTOTYPE WITH FOLLOWING FEATURES

- 1.A Sensor to detect the waste material type
- 2.AI sensor to detect the recyclable material or non recyclable material
- 3. And fixing the two storaging boxes in the smart bin to store the wet and dry waste material

#### TEST

## I GAVE THE PROTOTYPE TO 20 USERS FOR TESTING. THESE ARE THE THINGS I LEARNED THROUGH THEM:

- 1)SENSOR:THE Users are happy with this sensor because it helps them alot
- **2)AI:** the users also happy this because they are able to identify the recyclable and non recyclable waste material
- **3)Upgrade techonlogy:**by this the users and the stakeholders are happy because it makes the recycling process fast.