

Waste Management System – Part 1

Session 19





Topics covered

- Introduction to waste management system 1
- Advantages of waste management
- Activity: Detecting the waste







Waste Management system







Waste Management system – part 1

Nobody likes to live surrounded by waste. Not only does it make the surroundings look dirty but, if not managed properly, it can also spread diseases and even cause pollution.

Waste: Waste is any unwanted substance or object that is no longer useful to us. People also call it trash, junk, garbage.

We can commonly classify waste into two types:

1. Biodegradable: This type of waste includes substances that decompose naturally over time. Biodegradable waste can be used to make manure and is therefore helpful for the environment. E.g.,

fruits waste, vegetables waste, paper waste.

1. Non-Biodegradable: This type of waste includes substances that don't decompose naturally. Non-biodegradable waste causes pollution and harm the environment. E.g., plastic, metals, and rubber.

~ Paper ~ Vegetables

Type of Waste







Waste Management

Waste management or waste disposal are all the activities and actions required to manage waste from its inception to its final disposal. This includes amongst other things collection, transport, treatment and disposal of waste together with monitoring and regulation.

As it has a big important impact on our lives and the environment. Waste management is a burning issue in the modern world. The avoidance and reduction of waste is a very important part of waste management.

Advantages of Waste Management: There are many advantages of waste management. Some of them are:

- 1. It keeps the environment clean and fresh
- 2. It reduces environmental pollution
- 3. Waste management helps keep the surroundings clean
- 4. It can also help reuse or recycle resources, such as; paper, cans, glass, and so on.
- 5. Reducing waste will not only protect the environment but will also save on costs or reduce expenses for disposal.



Object Detection

Object detection helps in locating and identifying objects in digital photographs. It is a computer vision technique that helps to detect objects as well as classify them. The object to be detected may appear once or several times in the image. One of the applications of Object detection includes Self-driving vehicles which detect objects in realtime and act accordingly.

Before we make our waste management system, let's first understand how to detect the object.





Type of Waste

ACTIVITY DETECTING THE WASTE

Follow the steps below:

- 1. Open PictoBlox and create a new file from the menu-bar & select the coding environment as Python Coding.
- 2. Click on the **Toby.py** file from the Project files section.
- 3. Add the Object Detection extension.
- 4. Next, create an object **obj** of the class named Object Detection. With this, we can now access all the methods of this class using the object.
- 5. Turn on the camera using the function **obj.video("on").**
- 6. Start the while loop with True.
- 7. Now to acquire the data, invoke the method **obj.analysecamera()** using the obj object.
- 8. Now we will use the conditional statements to check if the number of objects is greater than 0. If the condition is True, we will make the sprite say the name of the object using **sprite.say()**. The object name can be obtained from **obj.classname()**.
- 9. Press the Run button to test the code.







Lets Code

```
sprite = Sprite('Tobi')
obj = ObjectDetection()
obj.video("on")
while True:
obj.analysecamera()
```

if obj.count() > 0:
 objects = obj.classname()
 sprite.say(objects)





Lets Code



Object Detection

SAVE THE PROGRAM

Save the project file as **Object Detection**.









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