



# CSN-103: Fundamentals of Object Oriented Programming

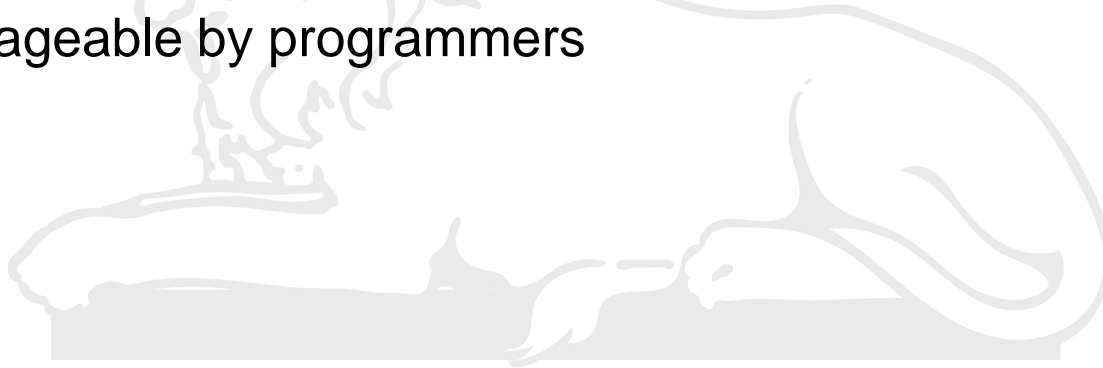
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# Procedural Oriented Programming

- Also called **Functional** Programming
- The primary focus is on Tasks/Functions
- Secondary focus in on Data
- Suitable for simple programs
  - Split bigger tasks into smaller one
- As program gets bigger and bigger
  - Unmanageable by programmers

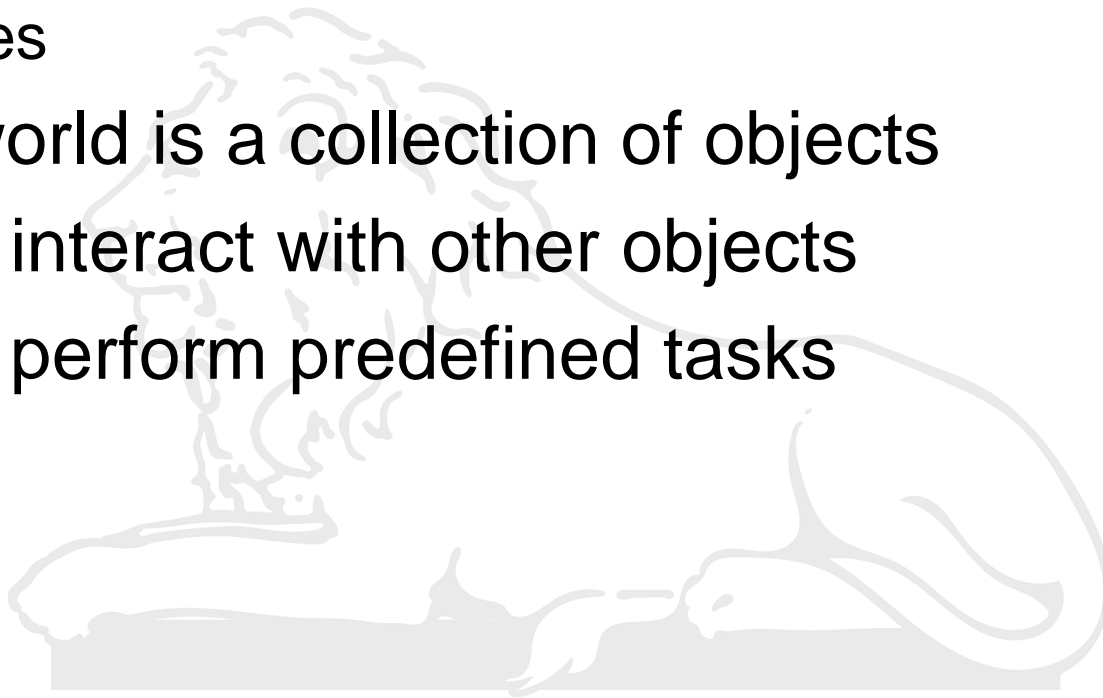


# Example: IIT Admission Process

- Steps involved
  - Fill the application form
  - Appear for IIT-JEE
  - Registration at security gate
  - Admission
    - Document verification
    - Documentation
    - Hostel allotment
    - Mess allotment.....
- Bad approach → All steps executed as one single task
- Better approach → One sub-task for each step

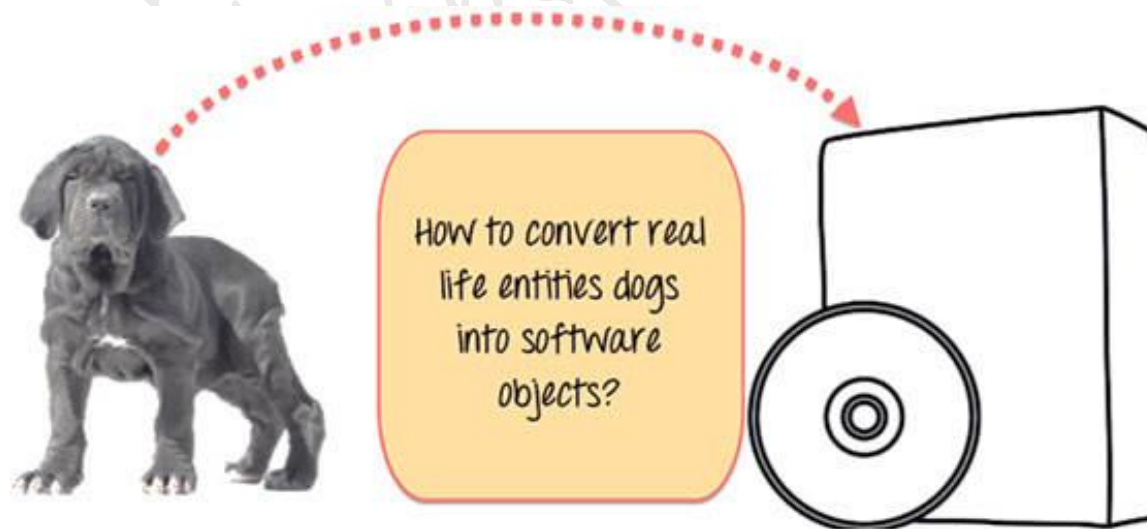
# Object-Oriented Programming

- Heart of Object Oriented Programming
  - Objects
  - Classes
- Entire world is a collection of objects
- Objects interact with other objects
- Objects perform predefined tasks



# Example

- Pet management system, specially for dogs\*
- Needs to store information
  - breed, age, size, color
- Real life thing → Software Entity
- How to design such a software

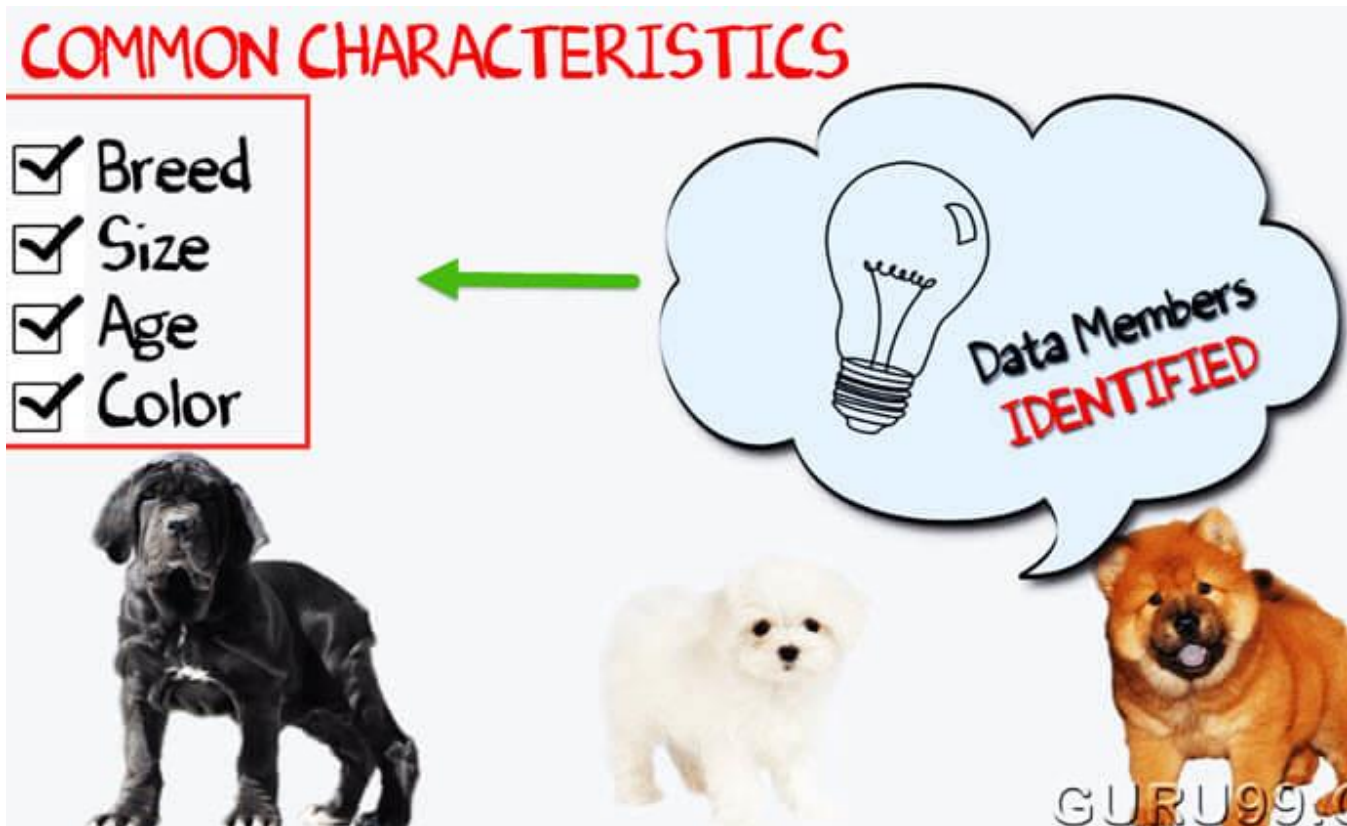


\*<https://www.guru99.com/java-oops-class-objects.html>

# Spot The Difference



# Common Characteristics



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# Common Actions



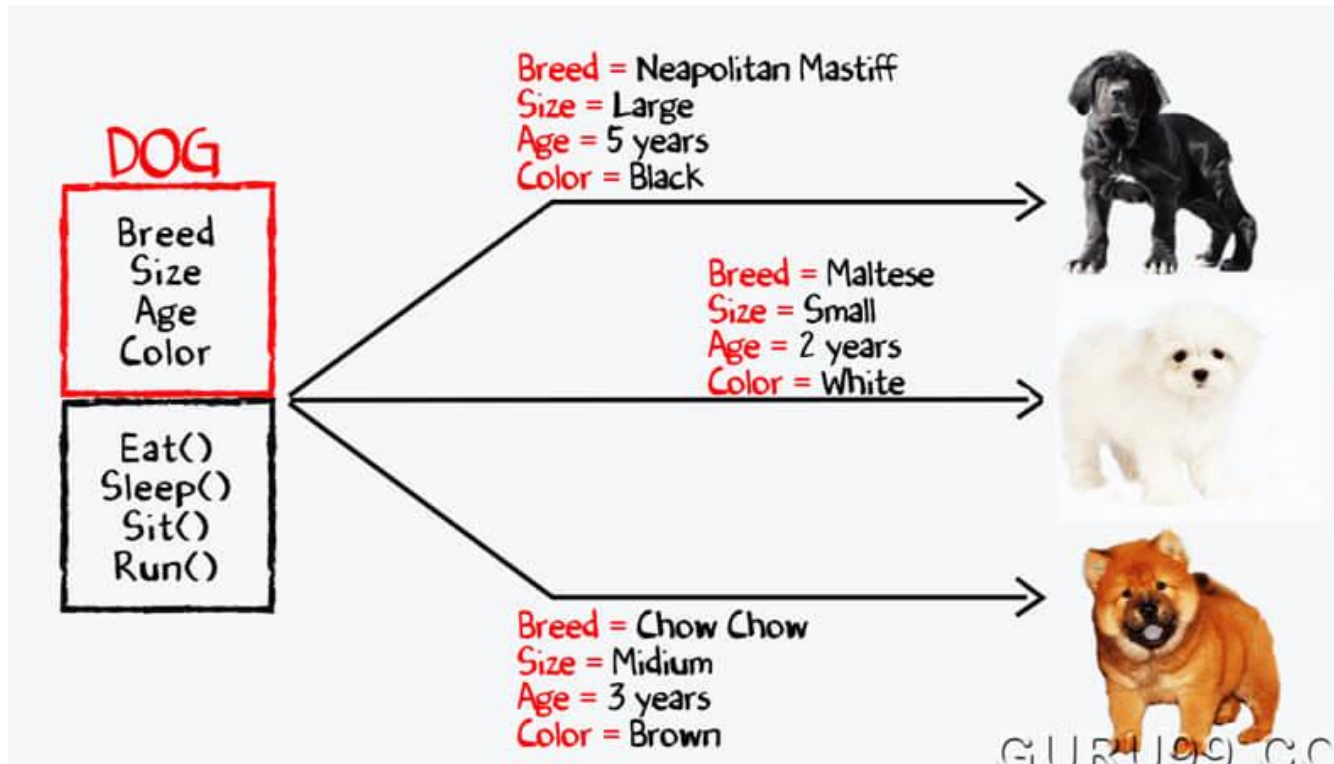
## COMMON ACTIONS

- ☒ Eat
- ☒ Sleep
- ☒ Sit
- ☒ Run





# Class and Objects



- Class is a logical construct, object is physical reality