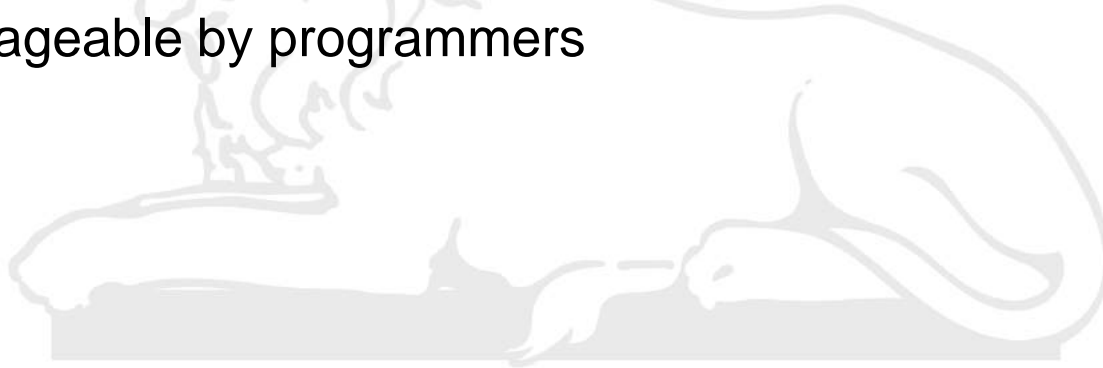


CSN-103: Fundamentals of Object Oriented Programming



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

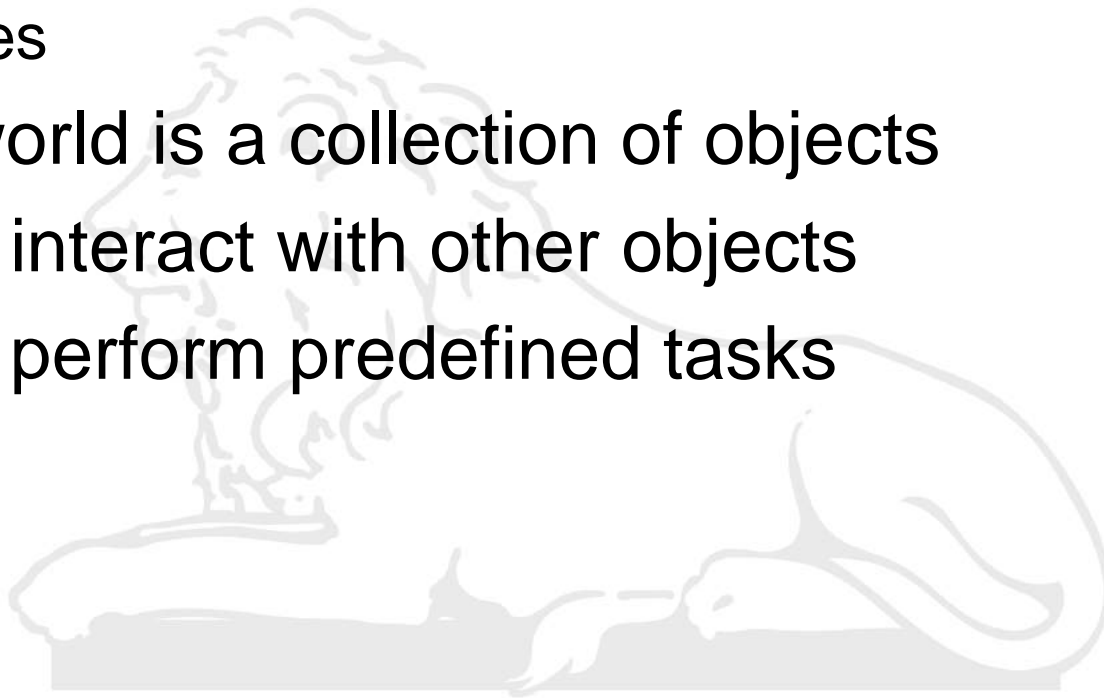


Example: IIT Admission Process

- 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

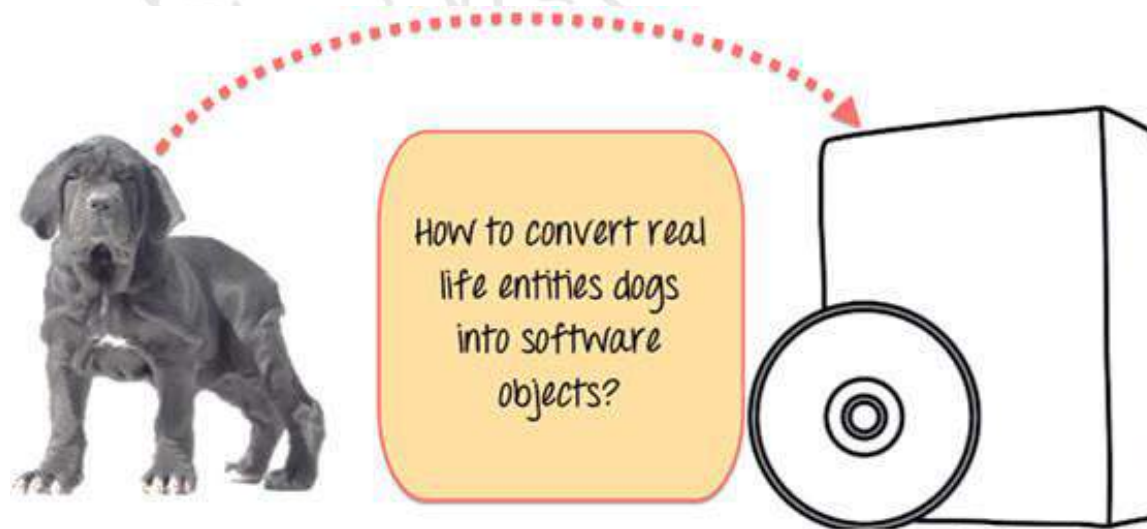
Object-Oriented Programming

- 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

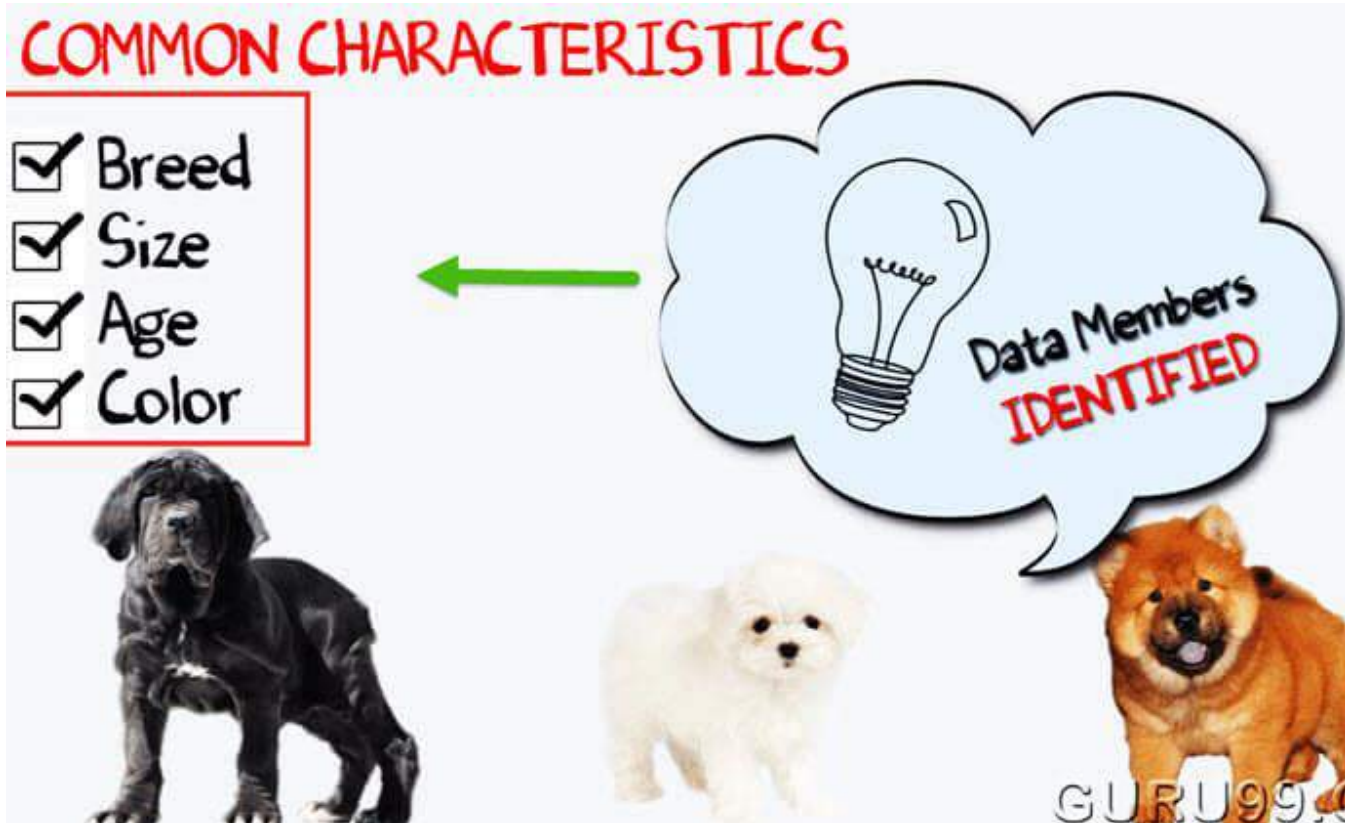


*<https://www.guru99.com/java-oops-class-objects.html>

Spot The Difference



Common Characteristics



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Common Actions

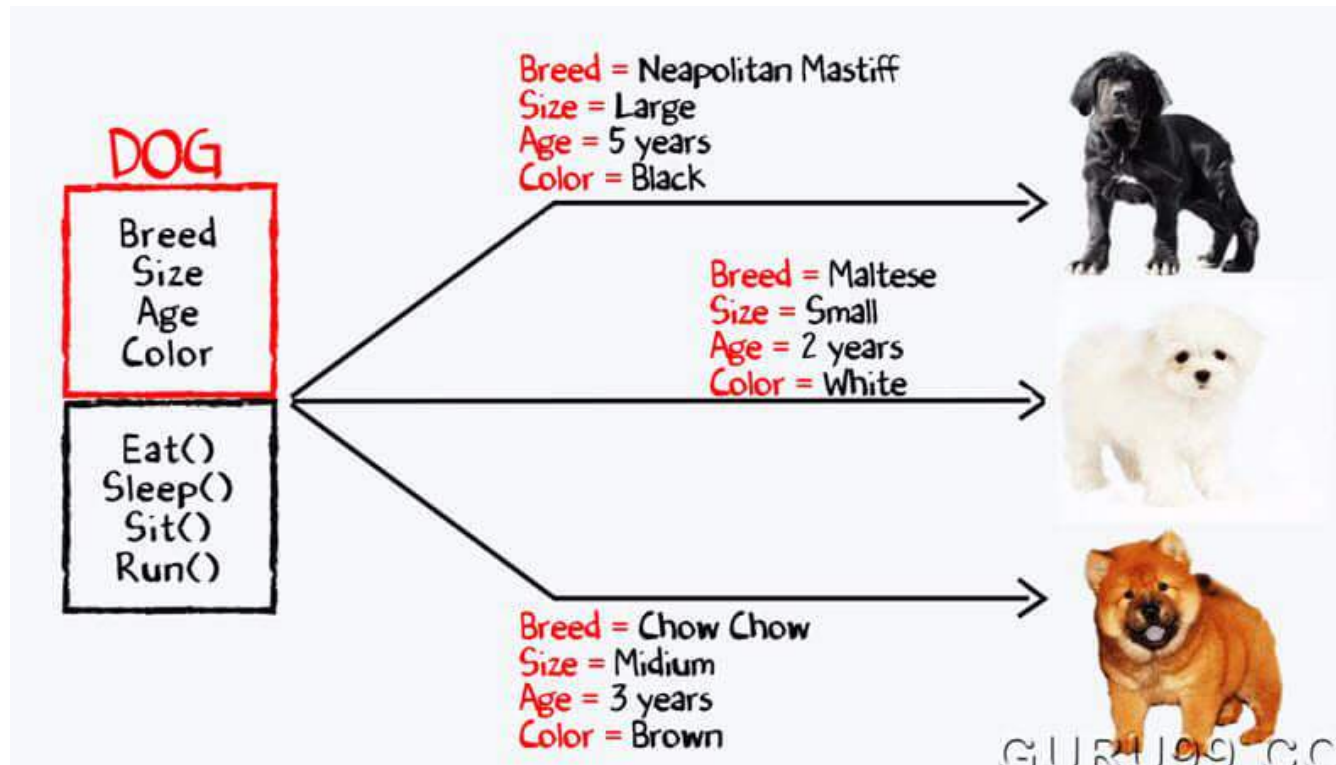


COMMON ACTIONS

- ☒ Eat
- ☒ Sleep
- ☒ Sit
- ☒ Run



Class and Objects



- Class is a logical construct, object is physical reality