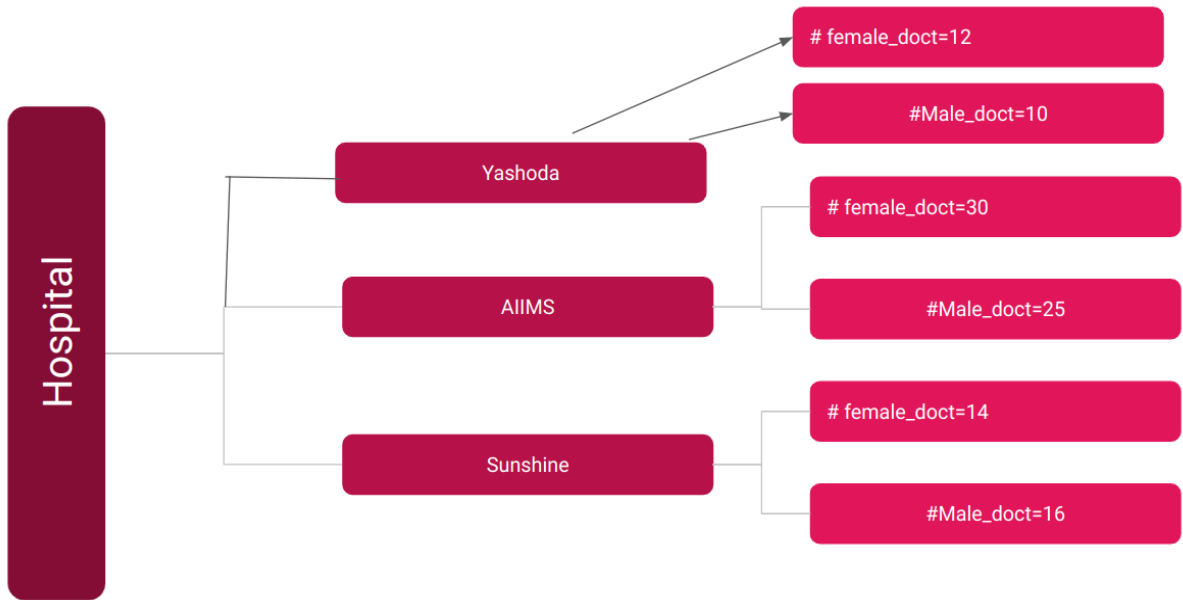# Programming and Data Structures-OOPS

1. Object-oriented programming System(OOPs) is programming based on the concept of " objects" and "classes" that contain data and methods.
2. **Class**: A class is a blueprint that defines the variables and the methods (Characteristics) common to all objects of a certain kind
   Base class (1) & derived classes(n)
3. **Constructor :**The task of a constructor is to initialize(assign values) to the data members of the class when an object of the class is created
4. Attributes created in .__init__() are called instance attributes-(class,instance)
5. Inheritance ,Polymorphism ..etc
6. **objects are mutable by defaul**t : You can change the values
7. Modifiers :

Modifiers	Within Class	Outside Class	Subclass
Private	Yes	No	NO
Protected	Yes	NO	Yes

Slide 1

Hospital

- Yashoda
  - # female_doct=12
  - #Male_doct=10
- AIIMS
  - # female_doct=30
  - #Male_doct=25
- Sunshine
  - # female_doct=14
  - #Male_doct=16

Slide 2

Task

Click to add text

- Car
  - Maserati
    - Color: Blue
    - Max Speed : 203
  - Bugatti
    - Color: Red
    - Max Speed : 440