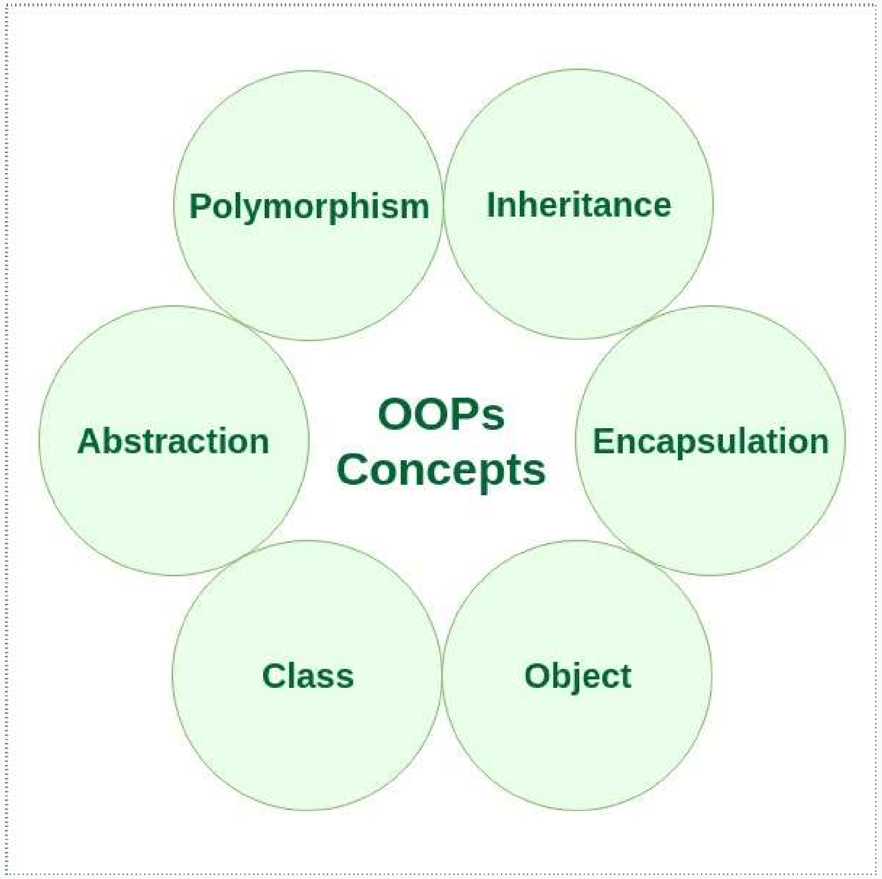
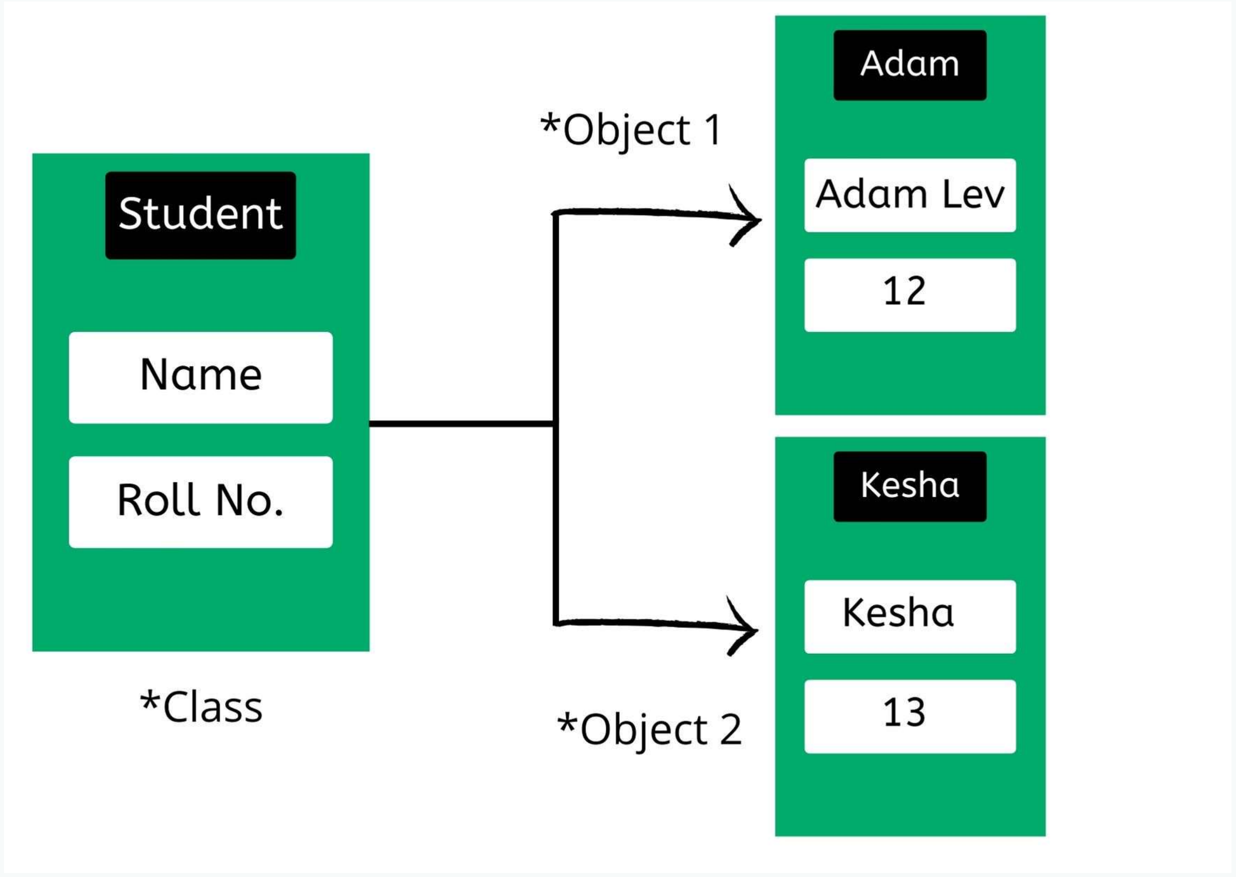
OOPS

OOPs Concepts

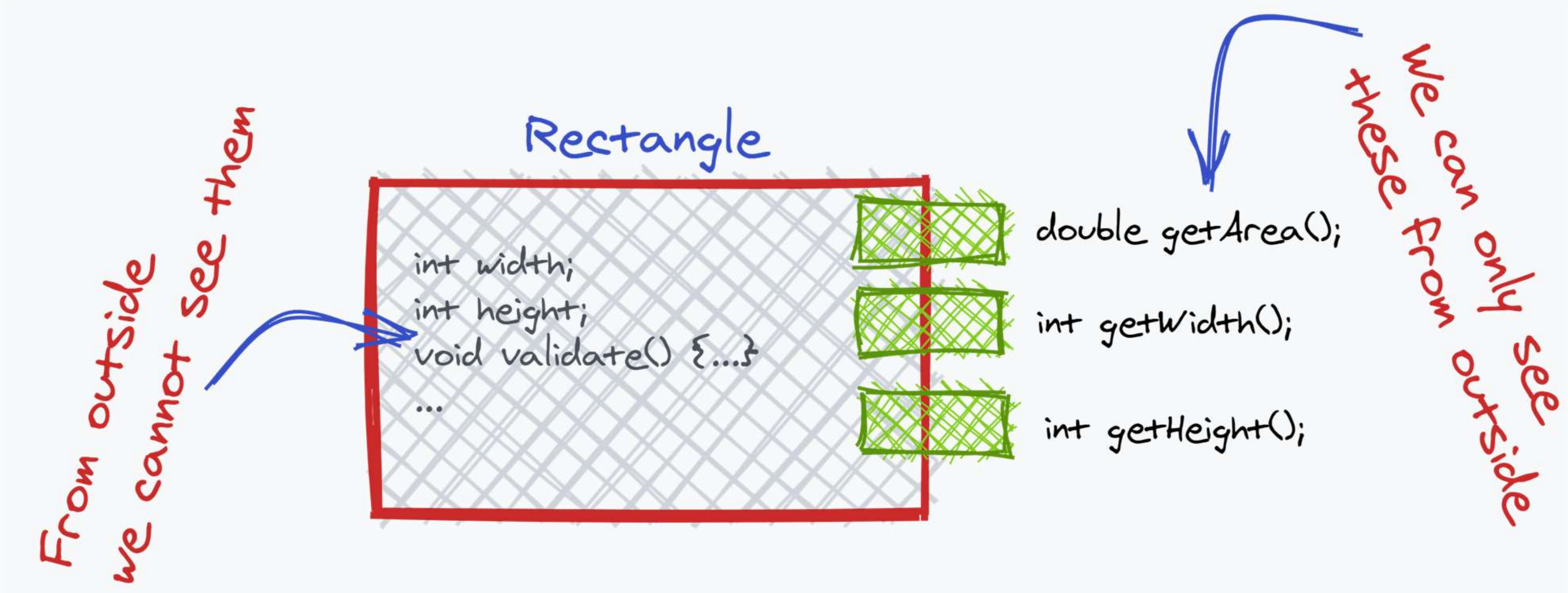


Example


Student
Name
Roll No.
*Class
*Object 1
Adam
Adam Lev
12
*Object 2
Kesha
Kesha
13

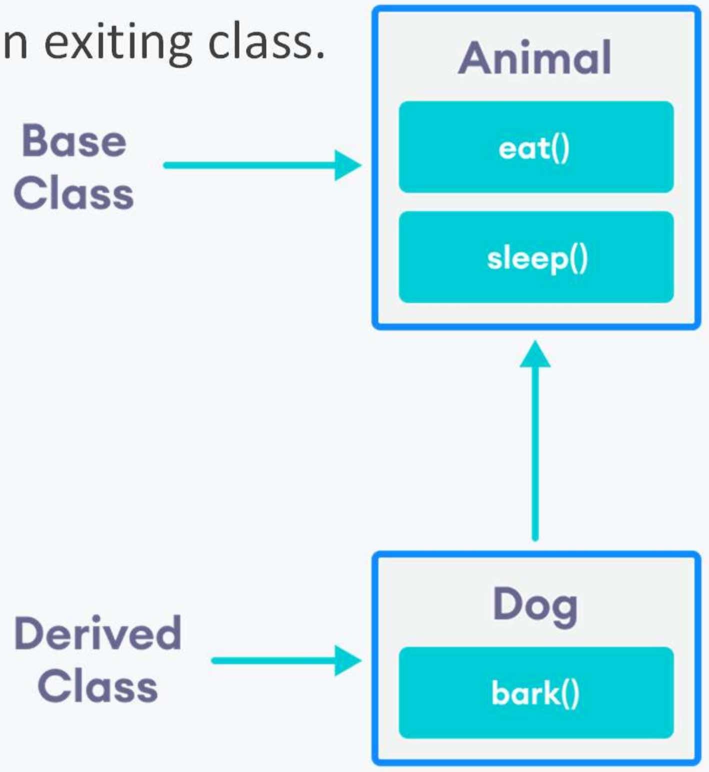
Abstraction

- Abstraction makes only the relevant details of an object visible.



Inheritance

- Creating a new class from existing class is called as inheritance.
- Process of creating a new class by adding some feature to an exiting class.
- Reusability of the code.

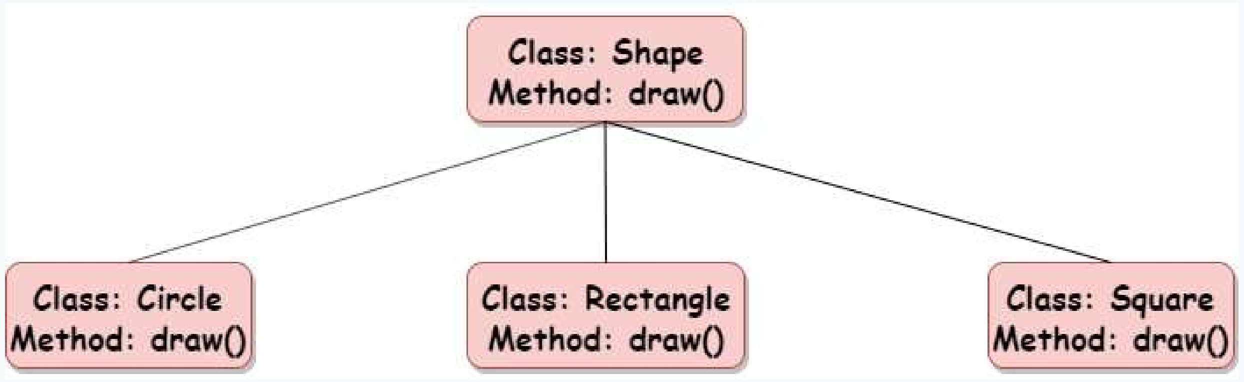


Override

- Subclasses can override inherited methods and provide specialized implementations for those methods
- Overriding means to create a different method definition for a method inherited from a subclass
- Overriding a method can be accomplished by passing a different number of different types of parameters

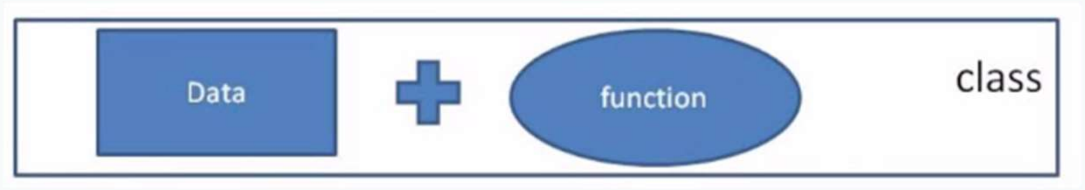
Polymorphism

- Having more than one form.
- Allows routines to use variables of different types at different times



Encapsulation

- Binding together the data and the functions that manipulates them
- Wrapping up of data and method into a single unit(called class) is know as encapsulation
- Data is not accessed by external function
- Private:
  - Access only with in a class, data member marked private
- Public:
  - Methods usually marked public, private variable through the public methods.



Constructor and Destructor

- The constructor is automatically invoked whenever an instance of the class is created e.g., Person aPerson = new Person();
- Constructors can take parameters but never have a return type.
- Constructor name and class name are same.

```
class Person {
    // Constructor
    public Person()
    {
        …
    }
}
```

Override

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Steps for Object-Oriented Programming Design

- Break down objects to their smallest features
- Look for commonality between the objects
- Look for differences between the objects
- Find the largest commonality between all objects
- Put the remaining common objects together and repeat

Thank You