Prabodh
Chapter -11
Inheritance & more on OOPs
The same of the sa
Inheritance is a way of creating a new class
from an existing class.
Syntax:
class Employee: Base Class
#codes
SAODIC DE LA SAULTE
Class Programmer (Employee): -> Derived or child
codes class
He can use the methods and cittributes of
employee in Programmer object. Also, we can
overwrite or add new attributes and methods
in Programmer class.
Tan of Inhandran
Types of Inheritance
1) Single inheritance
2> Multiple inheritance
3> Multileved inheritance
8) Prum reved 11/16 months
Single Inheritance
single inhanitance occurs where child dass
Single inheritance occurs where child class inherits only a single parent class.
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and the second of the second o
1 Base
Derived.

Multiple Inheritance occurs when the child class inherits from more than one parent class. Parent 1 Parent 2 Multilevel Inheritance When a child dass becomes a parent for another child class. super() method is used to access the methods of a super class in the derived class super().__init__() -> calls constructor of the base class Class Methods
A class method is a method which is bound
to the class and not the object of the
class. @classmethod decorator is used to create a class method

	one.
	syntax to creat a class method:
	The second secon
	@classmethod
	def (cls, p1, P2):
1	#code
	71 00 40
	consider the following class
	Cristal of the Johnson governor
	class Employee:
	@ oxpoxti
	aproperty def name (self):
	return self. name
	if $e = \text{Employee}()$ is an object of class
	employee We can print (ename) to print the
	ename/ call name() function.
	enance an required of
	@.getters and @.setters
	The method name with @property decorator is
4 0 15	culled dottex mothed.
1	We can define a function + Oname setter
	de corrator like below:
	according to the first the
halla i	aname setter
	def name (self, value):
	self, ename = value
	Operator overloading in Rython Operator in python can be overloaded using dunder methods.
	Operation in outhor can be overladed using
	Operator III (3411011)
	aynaes merillas.
a 10	

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These methods are called when a given
These methods are called when a given operator is used on the objects.
operator in python can be overloaded using the following methods:
the following methods:
P, + Po - D (P)-add-(Pe)
P1 - P2 - P1 - Syb - (P2)
11 12
P, *P2 -> P1 my (Po)
Sign the Direct Control of the Contr
P, / P2 -> P,tourdiv(P2)
a property of the second of th
P1/1/2 -> P1 floording -(P2)
- Amit Charles the line for the
Other dunder/magic methods in Python
al = () = D used to set wheat and a link ad
str() -> used to set what gets displayed upon calling str(obj).
aport courty stology.
len () -> used for set what arts displayed
won calling - len - 1) or
len () -> used for set what gets displayed upon calling len () or len(0bj).

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2	Chapter - 11 Practice Set
	Practice Set
Que 1	Create a class 2-D Vector and use of to
	create another class representing a 3-D
	vector. prichable de la serie son
Que 2.	Create a class pets from a class Animals
	and further Coeate class Dog from Pets.
	Add a method bark to class Dog.
~ ^	
Que, 3,	Greate a class employee and add Salary
	and increment properties to it.
	Write a method salary After Increment method
	with a aproperty decorator with a setter
	which changes the value of increment based on the salary.
	DOLECH OIL THE SALA IT.
Ouo U	White a class Complex to represent Connex
QUP 9	numbers along with overlanded operators
	Write a class Complex to represent Complex numbers, along with overloaded operators + and * which adds and multiplies
	them.
Que 5	Write a class vector representing a vector
	of n dimension. Overload the + and *
	operator which calculates the sym and
	blaite a class vector representing a vector of n dimension. Overload the + and * operator which calculates the sym and the dot product of them.

Que 6. Write __str__() method to print the vector as follows: 7:+8;+10% assume vector of dimension 3 for this problem. Quest. Overside the len_() method on vector of problem 5 to display the dimension of the vector.