1	Chapter 11 - Practice Set
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1	Create a JavaScript class to create a complex
z	number. Create a constructor to set the real
	Create a JavaScript class to create a complex number. Create a constructor to set the real and the complex part
"	Write a method to add two complex numbers in the above class
no then	It returns the it old belongs to the lass or and
3	Create a class Student from a class Human. Override a method & see changes
*	Override a method & see changes
4	See if Student is an instance of Human using instance of Reyword.
	instanceof Reyword.
5	Use getters & setters to set and not the real
"	use getters & setters to set and get the real and imaginary parts of the complex number

Chapter	HI	Object	Oriented	Programming
		1		

In programming we often take something and then extend it for example we might want to create a user object and "admin" and "guest" will be slightly modified variants of it

[[Prototype 1]
JavaScript objects have a special property called
prototype that is either null or references
another object

prototype object
[[Prototype]]

Object

When we try to read a property from a prototype and its missing, JavaScript Dutomatically takes it from the prototype. This is called "prototypal inheritance"

Setting Prototype
We can set prototype by setting __proto__
Now if we read a property from the object
which is not in object and is present in the
prototype, JavaScript will take it from prototype

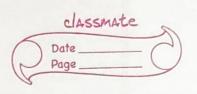
If we have a method in object, it will be called from the object. If its missing in object and prototype, its called from the prototype

Classes and Objects In object oriented programming, a class is an extensible program - code template for creating objects, providing initial values for state (member variable) and implementation of behavior (member functions)
In object oriented programming a class is an extensible
program - code template for creating objects providing
initial values for state (member variable) and
implementation of behavior (member functions)
The basic syntax for writing a class is:
Jones Ferman
Class My Class &
11 class methods
constructor () { }
method 1() { }
method 2() { o so}
3
We can then use new My (lass () to create a new object with all the listed methods
new object with all the listed methods
A ship when it
The constructor method
The Constructor () method is called automatically by
The Constructor () method is called automatically by new, so we can initialize the object there
ELAN TOTAL AND LEADER THE THE THE LIAMS
Quick Quiz: Create a class user and create a few methods along with a constructor.
few methods along with a constructor:
Suber Permitted
Class Inheritance
Class Inheritance is a way for one class to extend another class. This is done by using the extends keyword.
another class. This is done by using the extends
keyword.

The extends keyword is used to extend another class.
extends keyword is used to extend another
class.
with the release for the land to white
class Child extends Parent
We can create a class Monkey that inherts from Animal
from Animal
Class Phylloss 5 acres
class Monkey extends Animal &
hide () {
alert (\$ 9 this name & hides 1);
3 Book Dallachellan
class Monkey extends Animal & hide () & alert (\$1 this name & hides!);
let monkey = new Monkey ("Monu") monkey run (7); // from Animal monkey hide ();
monkey run (7); // from Animal
monkey hide ();
The Amstructor method
Method Overriding
If we create our own implementation of run, it will not be taken from the Animal class. This is called Method Overriding
if will not be taken from the Animal class.
This is called Method Overriding
interfered a still constant that a spectrumber:
Super keyword
When we override a method, we adon't want the
method of the brevious class to go in vain.
Me han execute it using super keyword
the second of th
Suber (a,b) -> (all parent constructor

run 1) {
suber run ()
this hide ()
3 (1 dollate a state
alet (" out) tola
Overriding Constructor With a constructor, things are a bit tricky/different According to the Specification, if a class extends another class and has no constructor, then the following empty constructor is generated
With a constructor things are a bit tricky / different
According to the specification, if a class extends
another class and has no constructor, then the
following empty constructor is generated
Class Monkey extends Animal &
// Outo generated
Constructor (args) &
super (args);
3 A MANAYO
=> Happens if we don't write our own Constructor
our own Constructor
Construction in interior classes north all as I
Constructors in inheriting classes must sall super () and do it before using this.
while no it defore using this.
lale com also use super mattend () in a Child mattend
We can valso use super method() in a Child method to call Parent Method
-10 yau runny runnou
Static method
Chatic methodo are used to implement functions that
belong to a class as a whole and not to
Static methods are used to implement functions that belong to a class as a whole and not to any particular object
will have organ

	We can assign a static method as follows:
	Class Employee &
	Class Employee & Static 5 Method () { alert ("Hey");
	alert ("Hey");
	3 refounding ambition
	their a sometiment thanks are a bit & turkered
	Employee. sMethod()
-	Describes Object and the Company of
	Static methods arent available for individual objects
-	Cicler and Seller
	Cacters and Setters Classes may include getters and Setters to get & Set the computed properties
1	Set The computed properties
	Example:
	Rest trans to a board of the
	class Person &
	get (name) & return this. name;
	return this. name;
	set name (newHame) {
	this. name = new Name;
	3
	Soft method
	first the name property is changed to name to
	avoid the name collision with the getter & setter
	First the name property is changed to name to avoid the name Collision with the getter & setter. Then the getter uses the get keyword as shown above



Instance of Operator allows to scheck whether object belongs to a certain class	
The instance of operator allows to whether	an
object belongs to a certain class	4
The state of the s	4
The syntax is:	
 oly > instanceof < class > 10 	3
Il vote her if ali belonge to the Class or any	ather
class inheriting from it	Office
It returns true if oly belongs to the Class or any class inheriting from it	-
See if Student is an interne of Human	P
See if Student is an instance of Human in	
tile getters & extins of the language the	-
Training raidway rate to strad highestern was	