Object Oriented Programming
Java: Class and Object

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What is an Object

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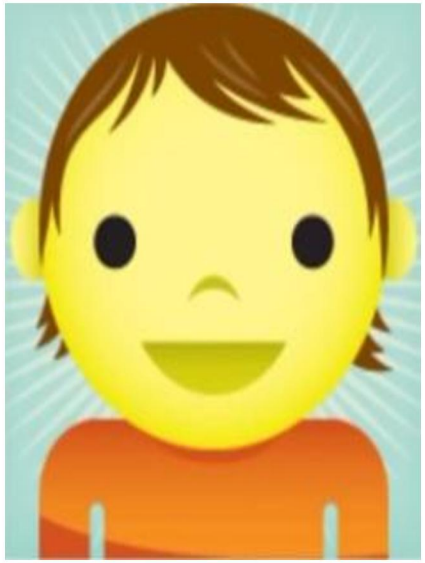
You



What do you have? (Properties)

Black hair	hairColor = “brown”
Black eyes	eyeColor = “black”
White skin	skinColor = “white”
White shirt	shirtColor = “orange”
6 feet tall	Height = “6 feet”
60 kgs	Weight = “60kg”

What do you do? (Actions)

eat	eat()
sleep	sleep()
walk	walk()
run	run()
play	play()

What is an Object?

Combination of your properties and actions

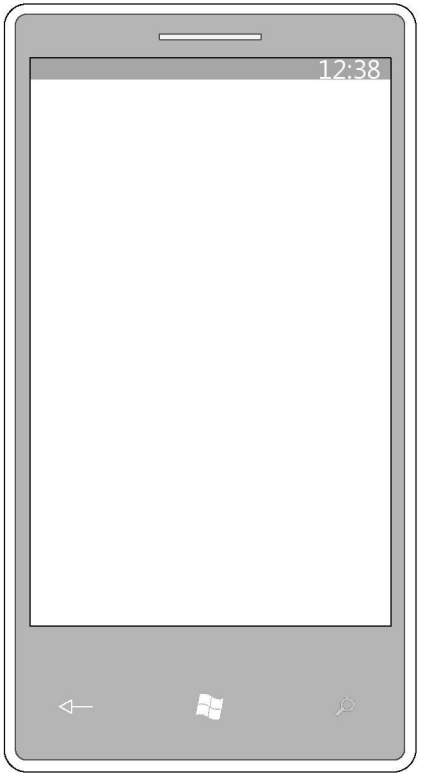
hairColor = “black”
eyeColor = “black”
skinColor = “white”
shirtColor = “white”
Height = “6 feet”
Weight = “60kg”
eat()
sleep()
walk()
run()
play()

What is an Object?

An object is any real world thing that you want to represent in a Program with two parts:

Something it has : properties
Something it does : Actions

Mobile



What it has? (Properties)

Width	width = “6 cm”
Height	height = “13 cm”
Color	Color = “gray”
OS	OS = “windows”
Price	price = “16000”
160g	Weight = “160g”

What it does? (Actions)

Call	call()
Run games	runGames()
Send SMS	sendSMS()
Browse Internet	browseInternet()
Run Apps	runApps()

So a mobile Object is:

A combination of it's properties and actions

width = "6 cm"
height = "13 cm"
Color = "gray"
OS = "windows"
price = "16000"
Weight = "160g"
call()
runGames()
sendSMS()
browseInternet()
runApps()

What is a Class

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You

Your Friend

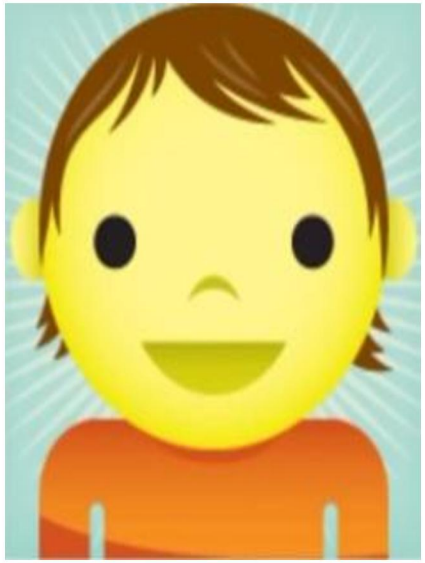
What do you have?(Properties)	What do you do?(Actions)	What does s/he has?(Properties)	What does s/he do?(Actions)
hairColor = “brown”	eat()	hairColor = “dark brown”	eat()
eyeColor = “black”	sleep()	eyeColor = “black”	sleep()
skinColor = “white”	walk()	skinColor = “black”	walk()
shirtColor = “orange”	run()	shirtColor = “blue”	run()
height = “6 feet”	play()	height = “5.5 feet”	play()
weight = “60kg”		weight = “55kg”	

You

Your Friend

What do you have?(Properties)	What do you do?(Actions)	What does s/he has?(Properties)	What does s/he do?(Actions)
hairColor = "brown"	eat()	hairColor = "dark brown"	eat()
eyeColor = "black"	sleep()	eyeColor = "black"	sleep()
skinColor = "white"	walk()	skinColor = "black"	walk()
shirtColor = "orange"	run()	shirtColor = "blue"	run()
height = "6 feet"	play()	height = "5.5 feet"	play()
weight = "60kg"		weight = "55kg"	

you



So a Class Is:

A combination of common properties name and common actions name.

Class Person

hairColor
eyeColor
skinColor
shirtColor
height
weight
eat()
sleep()
walk()
run()

What is class?

A class is the representation of common properties and functions of an object

int x=25, 25 is the value, x is the name of the variable and int is the type

Person you, you is the name of the object and Person (class) is the type

Class is the type of an object

Samsung

Windows

What it has?(Properties)

width = “6 cm”
height = “12 cm”
color = “gray”
OS = “Android”
price = “16000”
weight = “160g”

What it does?(Actions)

call()
runGames()
sendSMS()
browseInternet()
runApps()

What it has?(Properties)

width = “6.5 cm”
height = “13.5 cm”
color = “red”
OS = “windows”
price = “10000”
weight = “170g”

What it does?(Actions)

call()
runGames()
sendSMS()
browseInternet()
runApps()

Samsung

Windows

What it has?(Properties)

width = “6 cm”
height = “12 cm”
color = “gray”
OS = “Android”
price = “16000”
weight = “160g”

What it does?(Actions)

call()
runGames()
sendSMS()
browseInternet()
runApps()

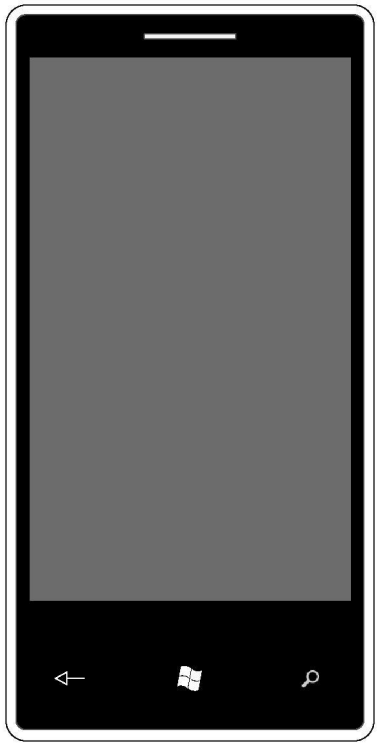
What it has?(Properties)

width = “6.5 cm”
height = “13.5 cm”
color = “red”
OS = “windows”
price = “10000”
weight = “170g”

What it does?(Actions)

call()
runGames()
sendSMS()
browseInternet()
runApps()

Mobile



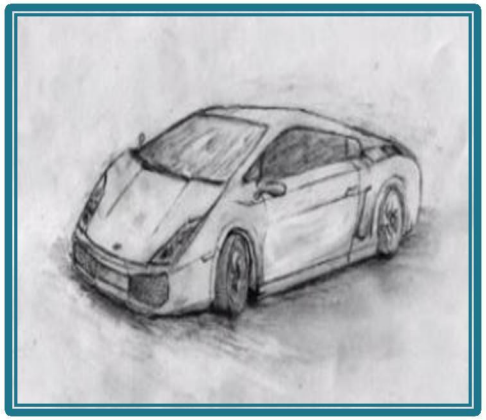
So a Mobile Class Is:

A combination of common properties name and common actions name.

Class Mobile

width
height
color
OS
price
weight
call()
runGames()
sendSMS()
browseInternet()
runApps()

Class vs. Object



Class

Object1

Class: Defines the blueprint for a set of objects of the same type

Object: Each one is unique real and has properties and actions

Object2

Reference:

Java : The Complete Reference
Seventh Edition
Herbert Schildt

Thank You