# Learn Java in an Hour

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# Classes and Objects

- Class:
  - A blueprint or a template that describes the methods and variables of each object.
  - A *plan* to create object(s)
- Object:
  - An instantiated (instance of a) class
  - For example, a *Person* class can have an object *beyonce*

# **Objects**

#### Have **attributes** and **behavior**

Example: **Beyonce** 

#### 1. State/Attributes

age, eyeColor, height, isAsleep

#### 2. Behavior/Actions

walk, speak, setChildName

# **Objects: Instances of a Class**

Have attributes and behavior

Example: **Beyonce** 

1. State/Attributes = variables

age, eyeColor, height, isPerforming

2. Behavior/Actions = methods

walk, speak, setChildName

## Class (Ball)

# **Objects (football)**

Variables = attributes Ex: color, size Methods = behavior Ex: bounce

#### **Variables**

int

char

String

boolean

int candidateCount2015;

candidateCount2015 = 25;

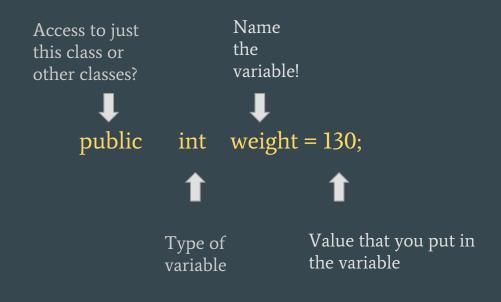
char firstInitial = 's';

boolean isOnExec;

#### whyAreTheNamesLikeThis



# **Declaring/Initializing Syntax**



public int weight;

# https://codepad.remoteinterview.io

# Constructing/Instantiating an object

name the object!



Student student1 = new Student();



class name

```
class Person
//variables: attributes of a person
private int age;
private boolean isAsleep;
private String eyeColor;
//main method
public static void main (String[] args) throws java.lang.Exception
   Person beyonce = new Person();
   beyonce.setAge(35);
 //method: actions or behavior
 public void setAge(int ageGiven) {
  age = ageGiven;
```

### Variables - Static/Class or Instance

Is it shared by all objects? (Static)

or

Does each object have a value unique to it? (Instance)

Example: private String favoriteMovie;

or private static String favoriteMovie;

Static or Instance?

#### **Variables**

## **Static**

public static int candidateCount;

public static int numberActive = 50;

## Instance

private boolean isOnExec;

private double gpa = 3.0;