

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

lowercase



camelCase

Declaring/Initializing Syntax

Access to just
this class or
other classes?



public

Name
the
variable!



weight = 130;



int

Type of
variable



Value that you put in
the variable

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;
```