Note:

This is a case where the videos are easier to understand than the pdfs alone.

The videos comment the slides step by step, this helps build your understanding.

Don’t read and rush. Watch the video instead!

To create an app, we use lots of boxes to organize all the objects that we need to build the app.
We create a box by giving it a name.

nameOfTheUser

nameOfTheUser;

**Note:**
- no space in the name
- no special character like !@#
- The first letter must be in lower case

Lines finish with a ;

Boxes are specialized: they contain just one type of object.

*Example: a box created to contain text will always contain text, never numbers or pictures*

So when we create a box, we must explain **in front of it** the kind of objects that can be put in it.

We say « String » for textual objects. Don't ask me why.
**Please note that object names always start with an uppercase letter**

String nameOfTheUser;

Text and numbers are the most simple objects that can be put in boxes.
Numbers are separated in different categories.

A box only for round numbers!

Integer ageOfTheUser;

A box which can contain decimal numbers!

Float averageRatingOfTheApp;

« Boolean » is another cool type of object. It has two values: true or false

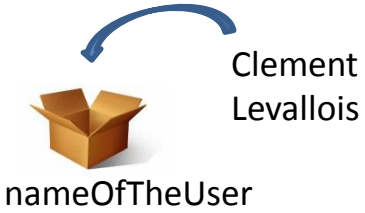
Creating a box which will contain just true or false values

Boolean isTheUserRegistered;


To put objects in boxes, we use the sign « = »

```
ageOfTheUser = 36;
```

When we put text in a box this is a bit special, it needs to be written between double quotes when we add it to a box:




```
nameOfTheUSer = “Clement Levallois”;
```

When we put new objects in boxes, it replaces what was there before:

```
ageOfTheUser = 37;
```

Now there is the number 37 in the box, 36 has been deleted.

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## Objects can have actions

(what?? What does it mean?? You said text – or String as you call it – is a type of object, I don’t see how text can have actions???)

Well, Strings can have lots of actions!
Example: turn the text to uppercase. Replace a letter by another. Find if the text contains a letter. Etc…

All actions of the object can be found by adding a dot (“.”) to the box that contains the object.

This action transforms the text in the box into CAPITAL LETTERS:

```
String nameOfTheUser;
nameOfTheUSer = “Clement Levallois”;
```

Why some brackets? We’ll explain that in just a moment.

Wow, should I know all these actions by heart???
No, just write the dot after the name of the box and a menu with all possible actions will appear.

```
nameOfTheUser.toUpperCase();
```

Name of the box

The dot!!

Name of the action

---

```
nameOfTheUser.concat(“ you are welcome!”);
```

This is what brackets are for. Sometimes actions need some object to work, and we put this object between the brackets.

What kind of objects can we put between the brackets? How many of them? It depends, all actions are different.

So here, if we had « Julie » in the box, after the action we will have: « Julie you are welcome! »

# RECAP

We create 2 empty boxes, specialized in containing text

```
String greetings;

String nameOfTheUser;
```

We add « Clement » to one box → `nameOfTheUser = “Clement”;`

We change the text inside the box to upper case, **and we add it back into the box*** → `nameOfTheUser = nameOfTheUser.toUpperCase();`

we apply the action « concat » to the box nameOfTheUser and we put the result of the action in the box « greetings » → `greetings = nameOfTheUser.concat(“, hello!”);`

Now we have the box “greetings” which contains: CLEMENT, hello!

* Why do we need to add it back to the box? Why not just writing nameOfTheUser.toUpperCase() and the content of the box would be immediately updated?
Good question… this is those who have invented the programming language who have chosen to do it this way.