CODAPPS

Coding Cheatsheet

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1. Variables and objects

General rules:

- The type of the variable (String, Long, Boolean…) start <u>with</u> a capital letter.

- variable names start <u>without</u> a capital letter.

String variables store text

Creating a String variable and giving it a value

```
String title = "Welcome to my app"; ①
```

① Don't forget the double quotes `"  "`!

Integer variables store round numbers

Creating an Integer variable and giving it a value

```
Integer classSize = 32;
int anotherClassSize = 25; ①
```

① `int` is like `Integer`. It takes less memory but is sometimes less convenient to use. Also, note: <u>no</u> double quote!! Double quotes are just for `String`.

Float and Double variables store decimals

Double** is like **Float** but can store **decimals with a lot more precision

Creating Float and Double variables

```
Float pi = 3.14f; ①
Double piVeryPrecise = 3.141592653589793238462643383279502884197169d; ②
```

① Don't forget the `f` letter at the end of your number. `float` or `Float` can be used, `float` takes less memory than `Float`.

② Don't forget the `d` letter at the end of your number. `double` or `Double` can be used, `double` takes less memory than `Double`.

Long stores big round numbers

*Long is like **Integer** but can store **bigger numbers***

Creating a Long variable

```
Long millisecondsSinceLastMonth = 364434030430414l; ①
```

① Don't forget the `l` letter at the end of your number. `long` or `Long` can be used, `long` takes less memory than Long but can be inconvenient to use.

Boolean stores true / false values

This seems not very useful but actually we use it quite often

Creating a Boolean variable

```
Boolean hasAStudentCard = true; ①
```

① A classic mistake is to write "true" (with double quotes, which is incorrect). Boolean values are `true` or `false` <u>without double quotes " "</u>. `boolean` can be used instead of `Boolean`: less memory but also less convenient to use in some cases.

`Objects`: to create and store a variety of things

A variety of objects exist - use them to create and store things

Creating an Object storing a Date

```
Date dateStartOfTheGame;    ①
dateStartOfTheGame = new Date(); ②
Date dateEndOfTheGame = new Date();   ③
```

① An object `dateStartOfTheGame` of type `Date` is <u>declared</u>. It is `null` at the moment.

② `dateStartOfTheGame` is <u>instantiated</u>: an instance of it is created.

③ Shortcut: a variable can be <u>declared</u> and <u>instantiated</u> in one line of code.