Intro Object Oriented Programming

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Agenda

```
├── Concepts
├── Data types
├── Arrays
├── Magic Words?
└── Intro POO
    ├── Scenario
    ├── Object oriented solution
    └── Classes
```

Programming paradigm

1. A high level model to conceptualize and structure a computer program implementation

Implementation

The process of moving an idea from concept to reality

Data types

Primitives

- byte = 0
- short = 0
- int = 0
- long = 0L
- float = 0.0f
- double = 0.0d
- boolean = false
- char = '\u0000'
- *String = null

Arrays

```
<type>[] <nombreVar> = new <type>[<size>]
```

```
1 // Declares an array of integers
2 int[] myArray;
3
4 // allocates memory for 10 integers
5 myArray = new int[10];
```

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Arrays
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When do we use new?

> **new**
> A Java keyword used to create an instance of a class.

Arrays

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How can we create an array to store everybody name's?

```java
1 int[] myArray = new int[10];
2
3 myArray[0] = 3;
4
5 System.out.print("El primer integer en el arreglo es: "
  + myArray[0]);
```

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What does the keywords in function main mean?

```
1 class Demo {
2     public static void main(String[] args){
3         ...
4     }
5 }
```

Scenario

We want a program to store UPA personnel data (students, teachers, admins, etc), for each user we want:

- Name
- Age
- Email

Does it scale well for three users?

▓▓▓ Object oriented solution

We want to bind all our properties (name, age, email) together as a single entity/object.

Usuario
edad : int correo : str nombre : str

Our endgoal is to group our attributes into a single object

```
1 persona1.nombre
2 persona1.edad
3 persona1.correo
```

Let's focus on the red section

Usuario
edad : int
correo : str
nombre : str

- What's our name convention for classes?

```
1 class Usuario {
2     ...
3 }
4 class E9IntroPoo{
5     public static void main (
6         String[] args
7     ){...}
8 }
```

Finally lets complete our full class

Usuario
edad : int
correo : str
nombre : str

References

https://www.oracle.com/java/technologies/glossary.html
https://docs.oracle.com/javase/tutorial/java/nutsandbolts/arrays.html