

A decorative background featuring a network diagram with nodes and connecting lines. Some nodes are highlighted with blue circles or dots. The diagram is composed of various sized circles (nodes) connected by thin lines, forming a complex web-like structure. Some nodes are solid blue, while others are outlined in blue or grey. The overall aesthetic is clean and modern, typical of a technical or scientific presentation.

Les tests unitaires

PLAN

- 1 - Qu'est-ce qu'un test unitaire ?
- 2 - Mise en pratique





1. QU'EST-CE QU'UN TEST UNITAIRE ?

Aussi appelé test de composants

A decorative network diagram at the top of the slide, featuring a central node with a blue double quote icon, surrounded by a dashed circle. This central node is connected to several other nodes, which are further connected to a larger network of nodes and lines extending across the top of the slide. The nodes are represented by small circles, some solid and some dashed, connected by thin lines.

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*Un **test unitaire** (ou TU) est une
procédure permettant de **vérifier le bon
fonctionnement** d'une partie précise
d'un logiciel ou d'une portion d'un
programme*

LES TESTS UNITAIRES...



...N'ONT RIEN DE MAGIQUE !




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CARACTÉRISTIQUES D'UN TEST UNITAIRE

- ◎ Un test unitaire est... **unitaire** !
- ◎ Il ne vérifie qu'**un seul comportement**
- ◎ Il doit être réalisé **par le développeur**
- ◎ Il **fait partie du code** applicatif
- ◎ Effectué **dans un environnement de dev**
- ◎ Il s'assure que la méthode fonctionne comme attendu



LES ÉTAPES D'UN TEST UNITAIRE

1. Setup
 2. Call
 3. Verify
 4. Teardown
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LES OUTILS

Framework	Language
PHPUnit	PHP
JUnit	JAVA
NUnit	.NET
Test::Unit	Ruby
Jasmine / Mocha / Chai / Jest / ...	JavaScript
cppUnit	C++



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Une assertion est une proposition, de forme affirmative ou négative, qu'on avance et qu'on donne comme vraie

NOTION D'ASSERTION

- ◎ AssertEquals / AssertNotEquals
- ◎ AssertTrue / AssertFalse
- ◎ AssertNull / AssertNotNull
- ◎ AssertThat
- ◎ Etc...

A decorative network diagram in the top-left corner, featuring a complex web of interconnected nodes and lines. The nodes are represented by circles of varying sizes, some with concentric rings, and the lines are thin and grey. The diagram is partially cut off by the left edge of the frame.

2. MISE EN PRATIQUE

A decorative network diagram in the bottom-right corner, similar to the one in the top-left. It shows a cluster of interconnected nodes and lines, with nodes represented by circles of varying sizes and some having concentric rings. The lines are thin and grey. The diagram is partially cut off by the right and bottom edges of the frame.

EXERCICE “Calculatrice”

Implémenter une calculette ainsi que sa classe de test

Pas d'IHM

Opérations :

- add(int a, int b)
- sub(int a, int b)
- mul(int a, int b)
- div(int a, int b)
- avg(int[] tab)

