### Junit JUnit is a testing framework for Java

Use: It is a simple framework to write repeatable tests

A test case is a program written in Java

JUnit is linked as a JAR at compile-time

Integrate JUnit in your project (with Maven)

**With Maven**

<dependencies>

<dependency>

<groupId>junit</groupId>

<artifactId>junit</artifactId>

<version>4.12</version>

<scope>test</scope>

</dependency>

...

</dependencies>

* Without Maven: add **junit.jar** on your classpath

**Junit:key concepts**

* JUnit is based on **Java annotations**
* Java annotations are a form of metadata, provide data about a program that is not part of the program itself.
* Java annotations have several uses:
  + Information for the compiler
  + Compile-time and deployment-time processing
  + Runtime processing

**Junit most used annotations**

* @org.junit.Test
* @org.junit.BeforeClass
* @org.junit.Before
* @org.junit.AfterClass
* @org.junit.After

Importorg.junit.\*;

publicclasstestClass1{

@BeforeClass

public static void setUpClass() throws Exception {

/ / Code executed before the first test method

}

@Before

public void setUp() throws Exception {

// Code executed before each test

}

@AfterClass

public static void tearDownClass() throws Exception {

// Code executed after the last test method

}

@After

public void tearDown() throws Exception {

// Code executed after each test

}

}

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**Junit assertions**

JUnit provides **assertion methods** for all primitive types and Objects and   
 arrays

In these methods the **expected value** is compared with the

### actual value.

The parameter order is:

Optional: a string that is output on failure

* expected value
* actual value

**Junit assertions**

### import static org.junit.Assert.\*;

assertEquals("failure - strings not equal", "text",

### "text");

assertFalse("failure - should be false", false); assertSame("should be same", number, number); assertArrayEquals("failure - byte arrays not same", expected, actual);