

Software Documentation

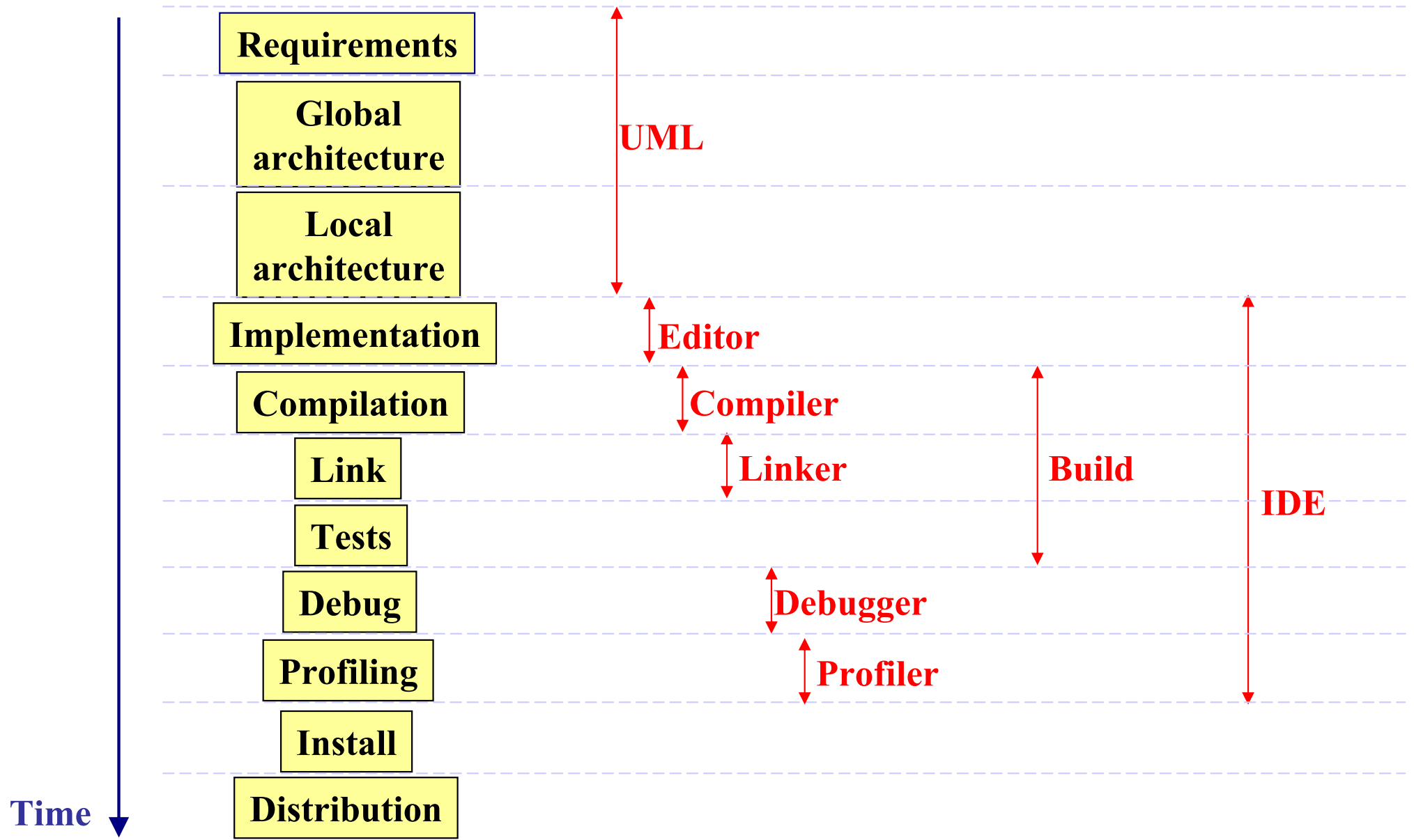
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Software Documentation

Tools



Outline

- What ?
- Why ?
- Who ?
- When ?
- How ?
- Where ?

What ? Various types of documentation

- Specification/Planning
- Architecture/Design
 - Overview of software
 - Includes relations to an environment and construction principles to be used in the design of software components
- Technical
 - Documentation of code, algorithms, interfaces, and APIs
- End User
 - Manuals for the end-user, system administrators, and support staff
- Marketing/Commercial
 - Product briefs and promotional materials

Why ?

- Documentation isn't the primary issue, communication is
- Define the **target audience of the documentation**
- Comprehensive documentation does not ensure project success
- Development planning :
 - Time spent documenting is time not spent writing code
- Different needs during and after the development

Who ? When ?

Who ?

- **Everybody** must document his code
 - Nobody will do it for you
 - Comments and a reference manual have different goals

When ?

- Document just-in-time : when you need it
- Document something only when it has stabilized
- Out of sync documentation is almost useless
- **Benefit** of having documentation **must be greater** than the cost of **creating** and **maintaining** it

How ? Where ?

- Text editors : emacs, Latex, Word, ...
- Specific tools :
 - Planning : MS Project, ...
 - Spec, Architecture/Design : UML Tools (MagicDraw, dia, ...), ...
 - Technical : document extractor (doxygen, javadoc, ...), ...
 - Marketing : Illustrator, Dreamweaver, ...
- Must be **versioned** with the rest of the software

Demonstration

Ogre3D : <http://www.ogre3d.org/>

- Wiki : http://www.ogre3d.org/wiki/index.php/Main_Page
- User Manual : <http://www.ogre3d.org/docs/manual/>
- API Reference built with doxygen : <http://www.ogre3d.org/docs/api/html/>
 - http://www.ogre3d.org/docs/api/html/classOgre_1_1Frustum.html
 - <http://ogre.cvs.sourceforge.net/ogre/ogrenew/OgreMain/include/OgreFrustum.h?revision=1.30&view=markup>

Conclusion

- What ? Various types of documentation
- Why ? Define the audience of the documentation
- Who ? Everybody
- When ? Document something when it has stabilized
- How ? Text editors and specific tools
- Where ? Close to the code and versioned

Useful Links

- Recommendations for software development at INRIA :
 - <http://devel.inria.fr/recom/>
- Software documentation :
 - Agile Documentation :
<http://www.agilemodeling.com/essays/agileDocumentation.htm>
 - Agile Documentation Strategies :
<http://www.ddj.com/dept/architect/197003363?pgno=2>
 - Wikipedia : http://en.wikipedia.org/wiki/Software_documentation
- Tools :
 - Mail-list, wiki, web : <http://gforge.inria.fr>
 - UML : http://en.wikipedia.org/wiki/Unified_Modeling_Language
 - Javadoc : <http://java.sun.com/j2se/javadoc/>
 - Doxygen : <http://www.doxygen.org/>
- List of development software at INRIA Sophia
 - <http://www-sop.inria.fr/dream/logiciels.html>