



合肥工业大学
HEFEI UNIVERSITY OF TECHNOLOGY

软件工具环境与实训

合肥工业大学
软件学院

张高峰



软件工具环境与实训

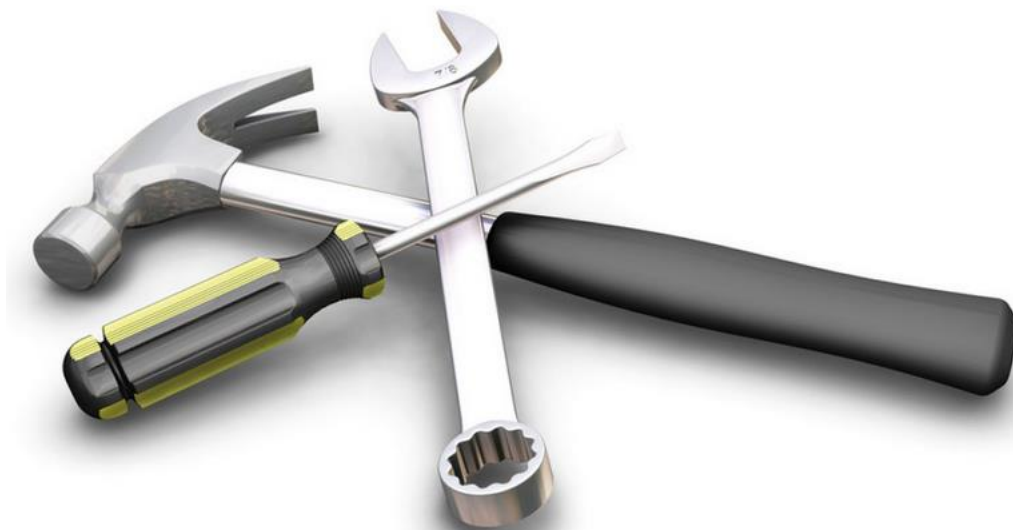
第1章 软件工具环境

- 开发IDE
- 移动开发工具软件
- 数字媒体工具软件
- 其他工具



目录

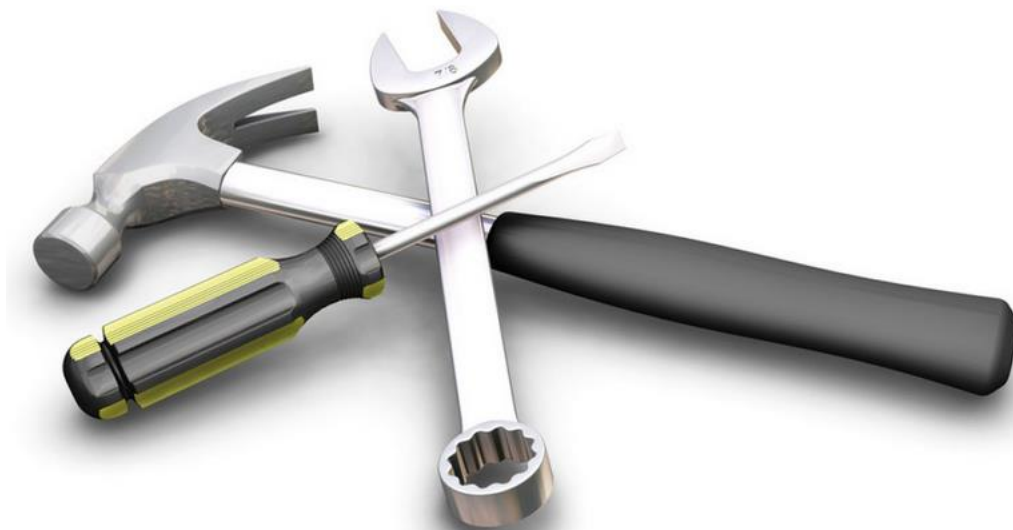
- 开发工具
- 移动开发工具
- 数字媒体工具
- 其他工具





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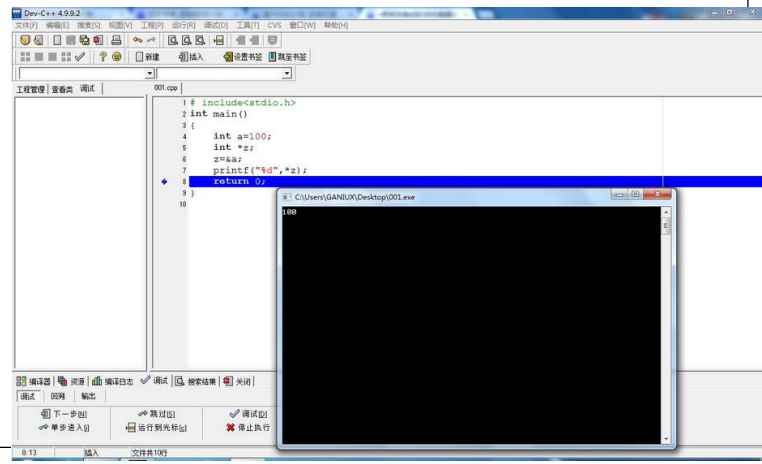
- 开发工具
- 移动开发工具
- 数字媒体工具
- 其他工具





开发工具

- 集成开发环境（IDE，Integrated Development Environment）
- 代码编写功能、分析功能、编译功能、调试功能等
- 历史悠久~~超过你们的想象！





部分主流开发工具

- Microsoft Visual Studio (VS)
- Eclipse
- NetBeans
- Python
- Xcode
- Google Android Studio
-



Microsoft Visual Studio

- 1997--Visual Studio 97: Visual Basic 5.0, Visual C++ 5.0, Visual J++, Visual FoxPro, Visual InterDev



Microsoft
Visual C++

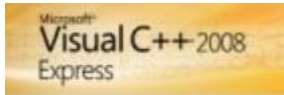
- 1998--Visual Studio 6.0: Visual C++ 6.0

Microsoft
.net

- 2002--Visual Studio .NET : C#

 Visual Studio

- VS2003 -> VS2005->VS2008->VS2010->VS2012 -> VS2013 -> VS2015 -> **VS2017->VS2019**



Visual Studio 2019

Microsoft
Visual Studio



Microsoft Visual Studio

- .NET framework

Visual Studio for Mac

- Multiple platforms



- The ENTRY of the WHOLE ecosystem of Microsoft.



Buy games, music, movies and TV shows.



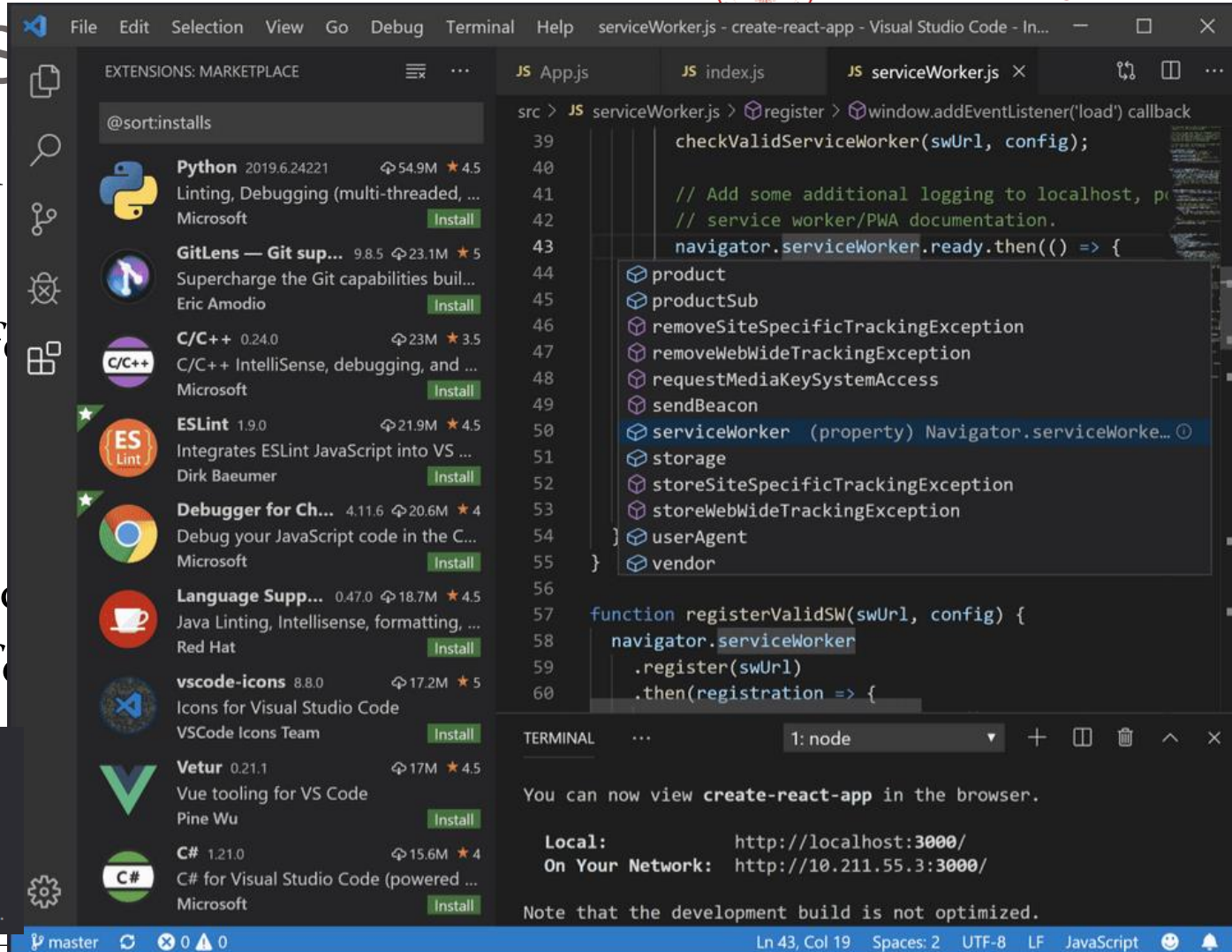


Visual S

- From 201
- ALL platf
- It aims to
- code-build
- to fuller f

Code editing.
Redefined.

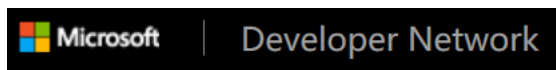
Free. Built on open source. Runs everywhere.





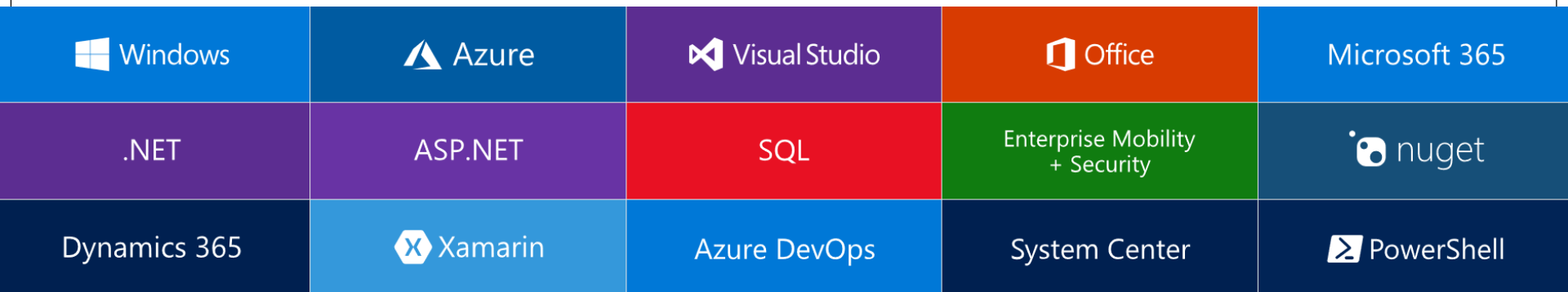
Microsoft Visual Studio

- MSDN->Developer Network !



developer.microsoft.com

Any Developer. Any App. Any Platform.

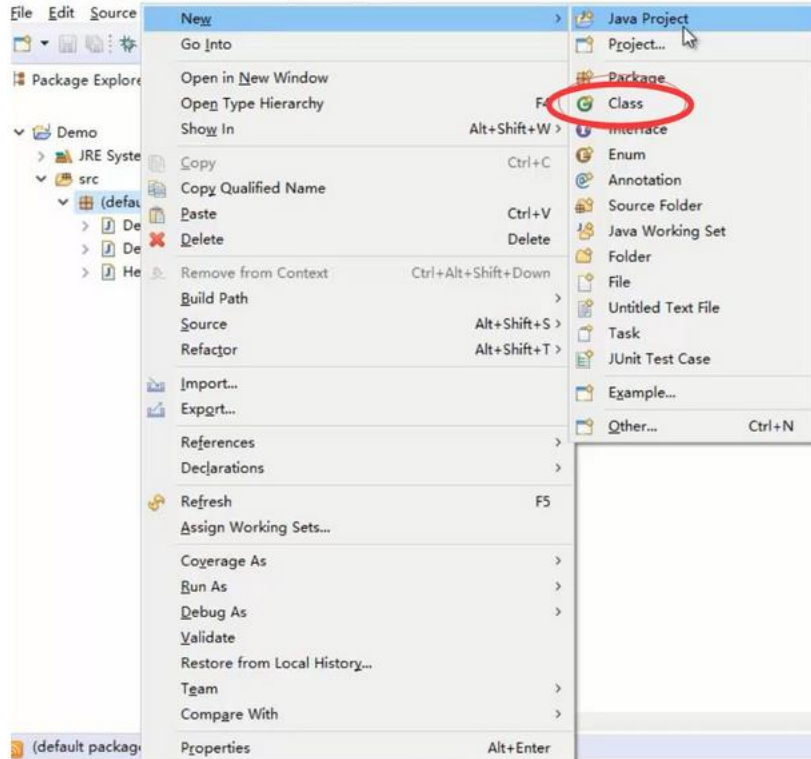


版本号	代号	发布日期
Eclipse 3.1	IO	2005
Eclipse 3.2	Callisto	2006
Eclipse 3.3	Europa	2007
Eclipse 3.4	Ganymede	2008
Eclipse 3.5	Galileo	2009
Eclipse 3.6	Helios	2010
Eclipse 3.7	Indigo	2011
Eclipse 4.2	Juno	2012
Eclipse 4.3	Kepler	2013
Eclipse 4.4	Luna	2014
Eclipse 4.5	Mars	2015
Eclipse 4.6	Neon	2016
Eclipse 4.7	Oxygen	2017
Eclipse 4.8	Photon	2018
Eclipse 2018-09 (4.9)	Eclipse 2018-12 (4.10)	2018
Eclipse 2019-03 (4.11)	Eclipse 2019-06 (4.12)	2019



Eclipse

eclipse-workspace - Demo/src/Demo2.java - Eclipse



Eclipse

- Various faces~~

Eclipse IDE for Enterprise Java Developers

353 MB 426,290 DOWNLOADS

Tools for Java developers creating Enterprise Java and Web applications, including a Java IDE, tools for Enterprise Java, JPA, JSF, Mylyn, Maven, Git and more.

Eclipse IDE for Java Developers

201 MB 237,575 DOWNLOADS

The essential tools for any Java developer, including a Java IDE, a Git client, XML Editor, Mylyn, Maven and Gradle integration

Eclipse IDE for Eclipse Committers

356 MB 30,811 DOWNLOADS

Package suited for development of Eclipse itself at Eclipse.org; based on Eclipse Platform adding PDE, Git, Marketplace Client, source code and developer documentation.

Eclipse IDE for PHP Developers



222 MB 24,610 DOWNLOADS

The essential tools for any PHP developer, including PHP language support, Git client, Mylyn and editors for JavaScript, HTML, CSS and XML.

Eclipse IDE for C/C++ Developers



237 MB 257,788 DOWNLOADS

An IDE for C/C++ developers with Mylyn integration.

Eclipse IDE for Java and DSL Developers

364 MB 23,654 DOWNLOADS

The essential tools for Java and DSL developers, including a Java & Xtend IDE, a DSL Framework (Xtext), a Git client, XML Editor, and Maven integration.

Eclipse IDE for Web and JavaScript Developers (includes Incubating components)

189 MB 10,522 DOWNLOADS

The essential tools for any JavaScript developer, including JavaScript, TypeScript, HTML, CSS, XML, Yaml, Markdown... languages support; Kubernetes, Angular and React frameworks support; Node.js debugger; Git client; Mylyn task management; integrated terminal and remote filesystem explorer; Web and application server management.




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Eclipse

- Various faces~~

Eclipse Modeling Tools


446 MB 5,120 DOWNLOADS



The Modeling package provides tools and runtimes for building model-based applications. You can use it to graphically design domain models, to leverage those models at design time by creating and editing dynamic instances, to collaborate via Eclipse's team support with facilities for comparing and merging models and model instances structurally, and finally to generate Java code from those models to produce complete applications. In addition, via the package's discover catalog, you can easily install a wide range of additional powerful, model-based tools and runtimes to suit your specific needs.

Eclipse IDE for RCP and RAP Developers (includes incubating components)


311 MB 4,857 DOWNLOADS



A complete set of tools for developers who want to create Eclipse plug-ins, Rich Client Applications or Remote Application Platform (RCP+RAP), plus Maven and Gradle tooling, and an XML editor. It contains the EGit tooling for accessing Git version control systems. The Eclipse Passage (Incubation) helps to enable license management for your Eclipse-based products

Eclipse IDE for Scientific Computing


327 MB 2,544 DOWNLOADS



Tools for C, C++, Fortran, and UPC, including MPI, OpenMP, OpenACC, a parallel debugger, and remotely building, running and monitoring applications.

Eclipse IDE for Rust Developers (includes Incubating components)


171 MB 2,143 DOWNLOADS



The essential tools for any Rust developer, including Rust language support, Git client, command-line integration, Mylyn and editors.

Eclipse IDE for Scout Developers


268 MB 1,375 DOWNLOADS



Eclipse Scout is a Java/HTML5 framework to develop business applications that run on the desktop, on tablets and mobile devices. This package includes Eclipse IDE support for Scout developers and source code.

Eclipse IDE for Testers

162 MB 1,929 DOWNLOADS



This package contains Eclipse features that support the software development quality assurance process, such as Jubula and Mylyn.



NetBean

- Sun (Oracle), 2000-→Apache Software Foundation, 2018



- NetBeans IDE is the **official** IDE for Java 8.
- Opensource, free, cross-platforms



- **General Java Development**

Including project setup basics, editing tricks, building, testing, and debugging Java applications and working with Maven

- **Integration with External Tools and Services**

Including integration with databases and using source code management systems

- **Java GUI Applications**

Including the Java GUI Builder and internationalizing Java GUIs

- **Java EE & Java Web Applications**

Including Java web technologies, Enterprise JavaBeans, Java Persistence, and web frameworks such as JavaServer Faces, Struts, GWT and Spring

- **Web Services**

Including Software as a Service and RESTful web services

- **NetBeans Platform (RCP) and Module Development**

Including NetBeans plugin and Swing Desktop application development

- **C/C++ Applications**

Including project creation, code assistance, and debugging

- **PHP and HTML5 Applications**

Including editing PHP, JavaScript and CSS and debugging applications

- **Mobile and Embedded Applications**

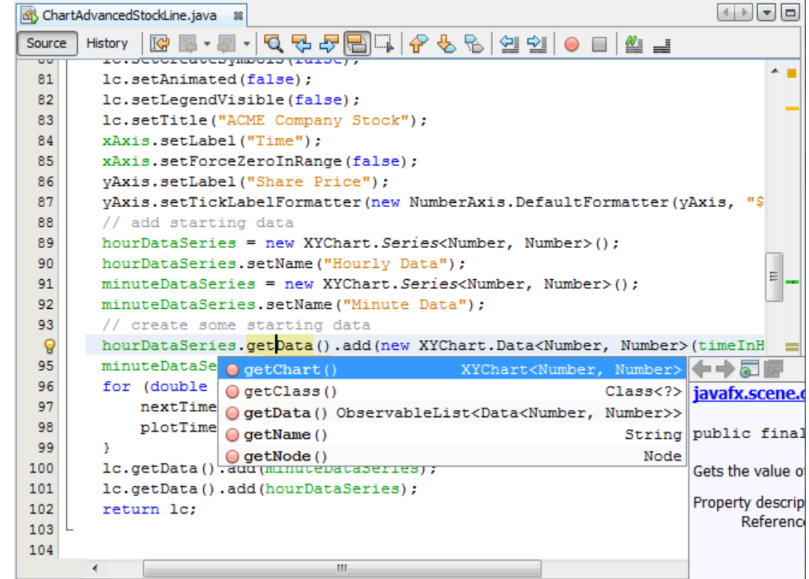
Including Java ME MIDP/CLDC and CDC and Java Card application support.

5
also
opers.
users

Choose Project



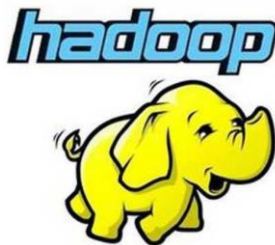
Demonstrates how the order in which the interceptors are invoked can be altered using the deployment descriptor.





Python

- AI



- BigData



- Cloud computing





Python

- Python(蟒, 蚺)



- IDLE: Pure one

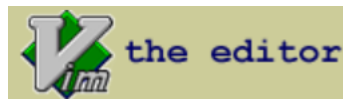


- Pydev: Eclipse, VS

- PyCharm: JetBrains



- VIM



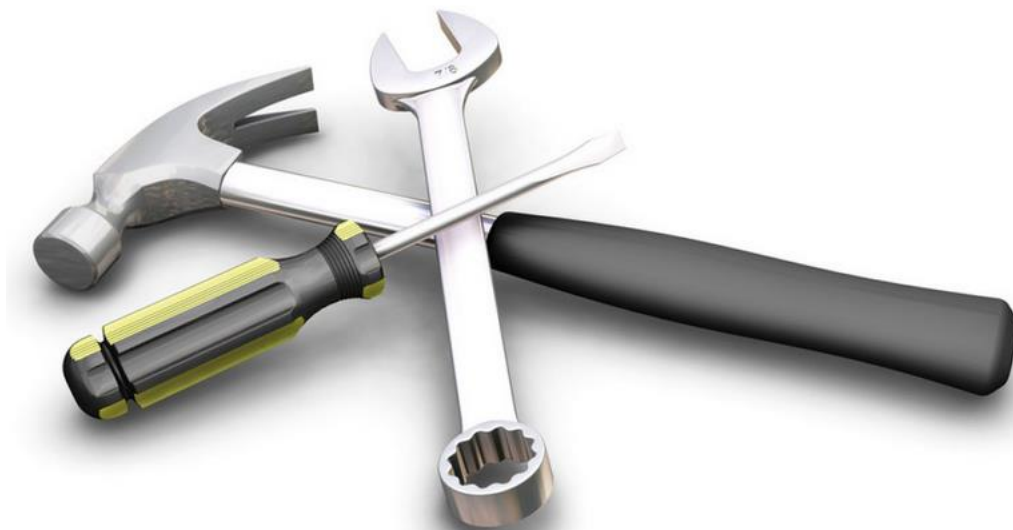
- Sublime





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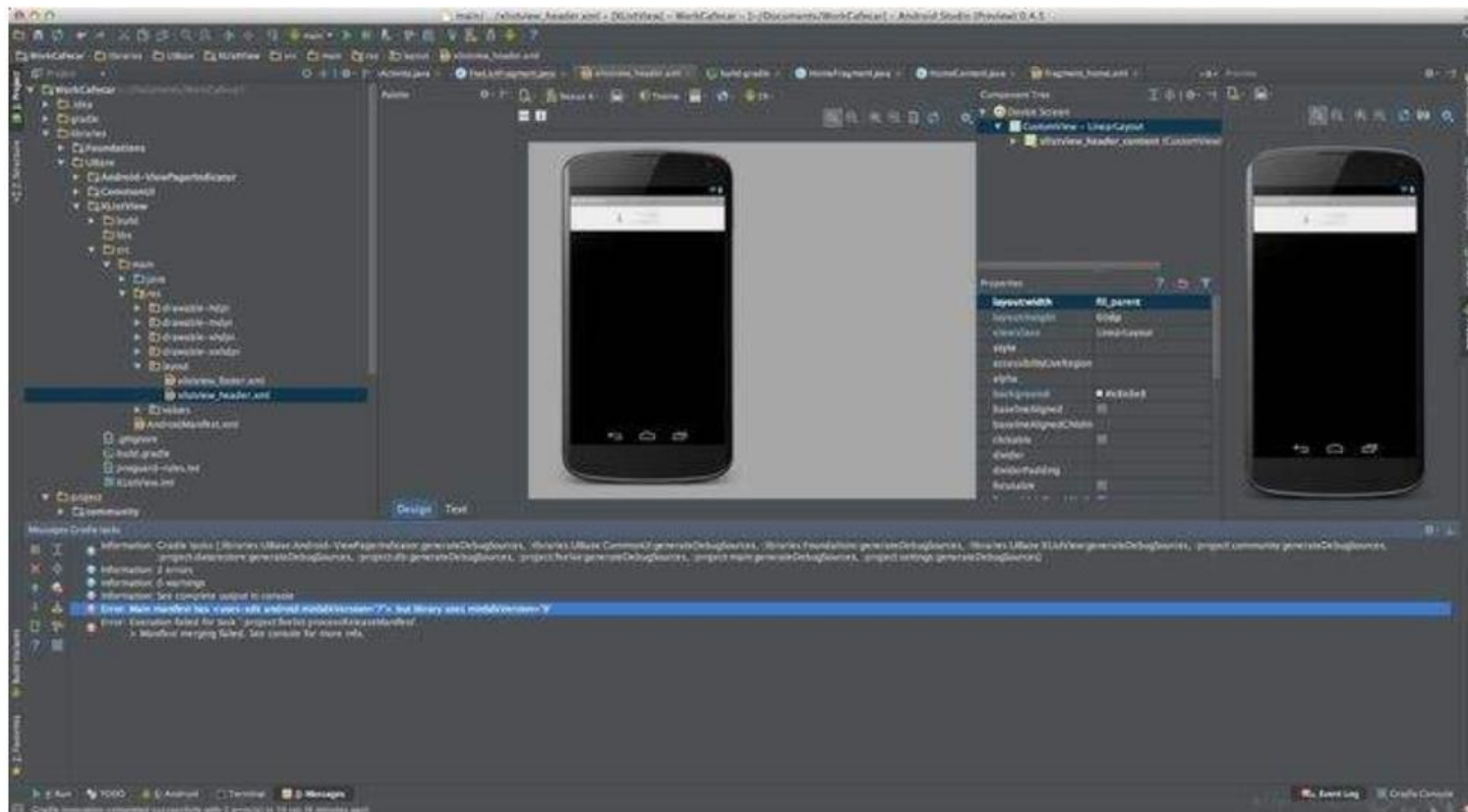


移动平台

- Android
- iOS
- Windows Phone
- Blackberry
- Palm
-



Android平台





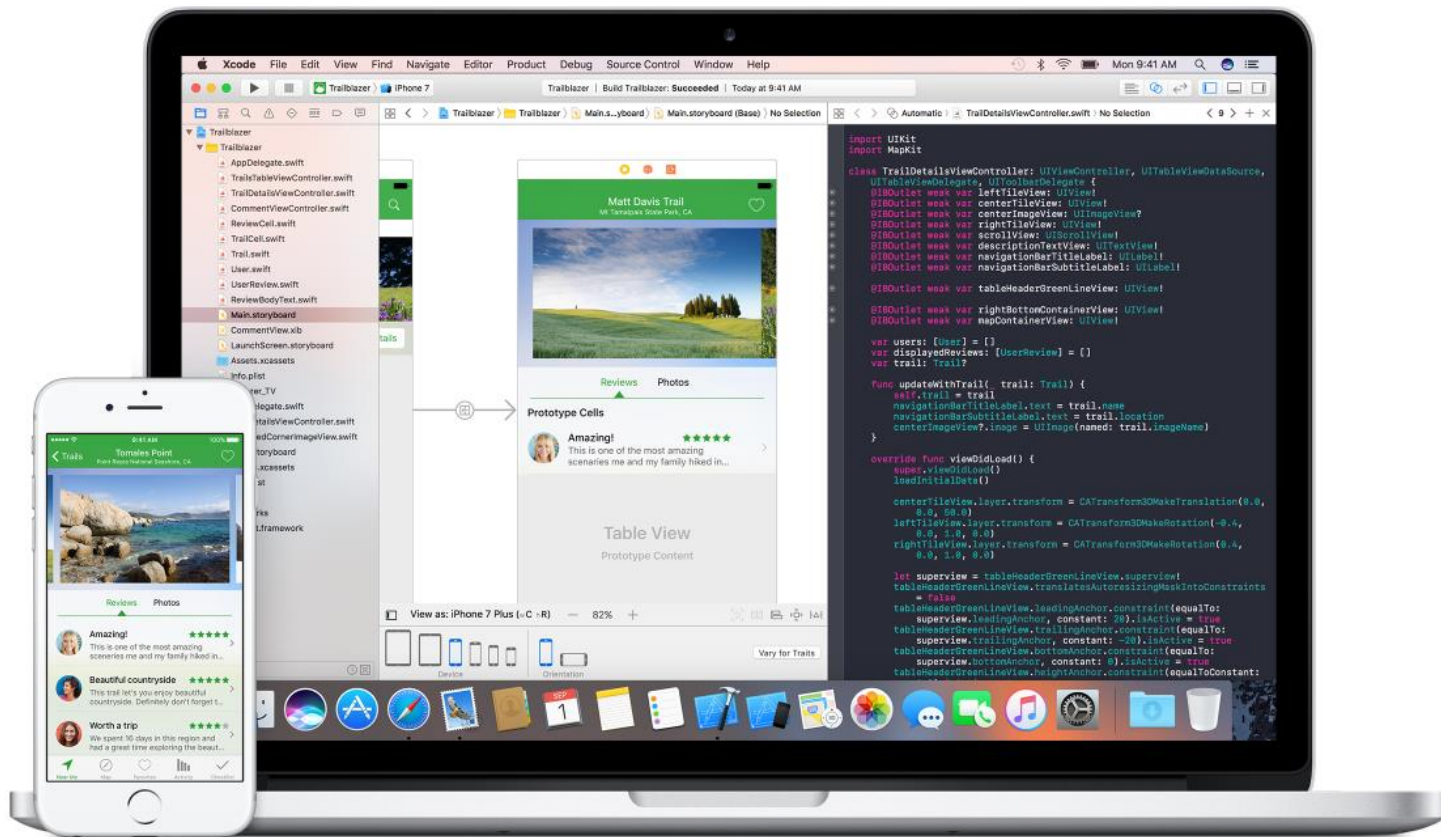
Android 架构



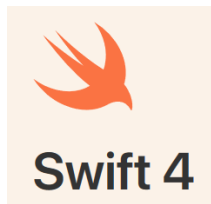
iOS平台



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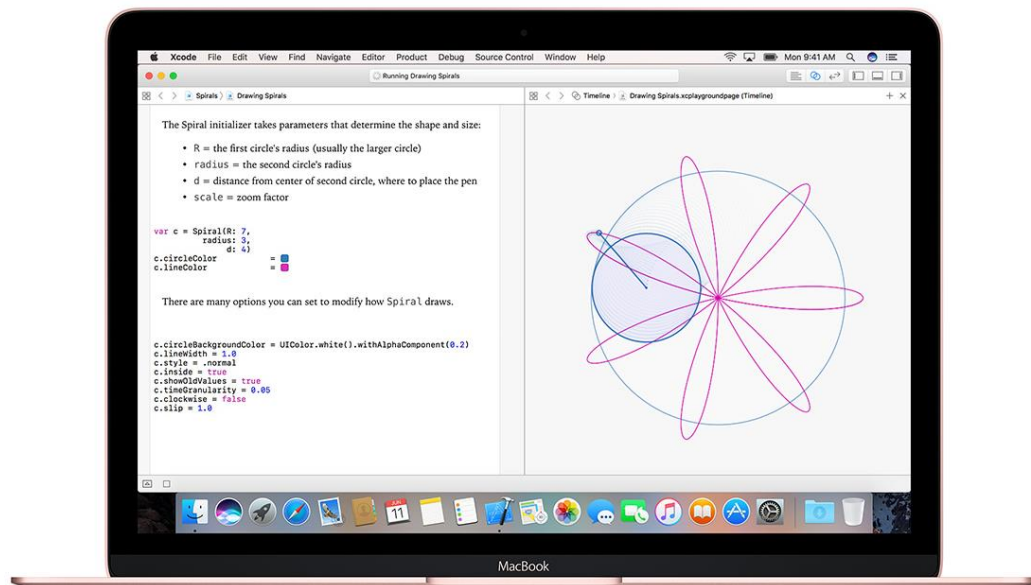
iOS平台



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- Swift: Cocoa

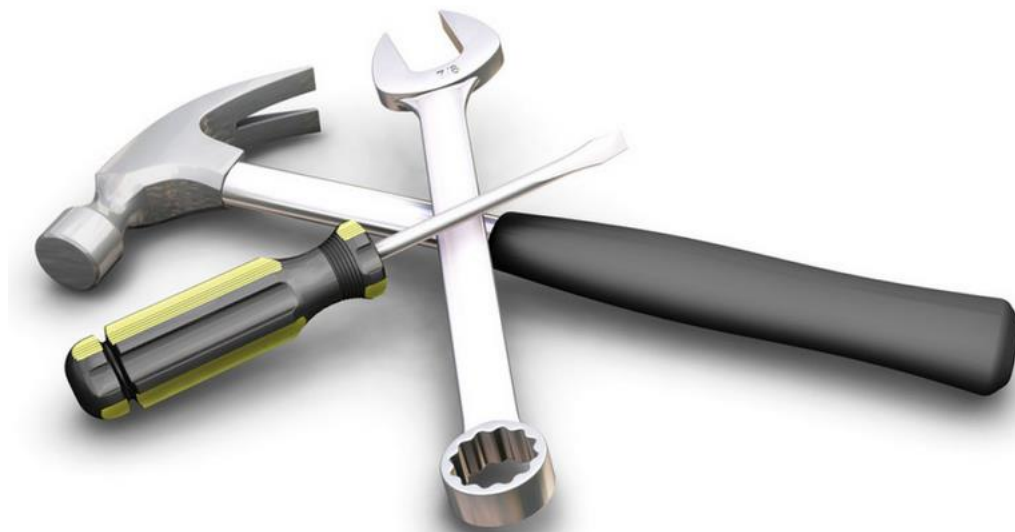
- Objective C \neq C++





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数字媒体工具

- 3DMax



- Unity3D



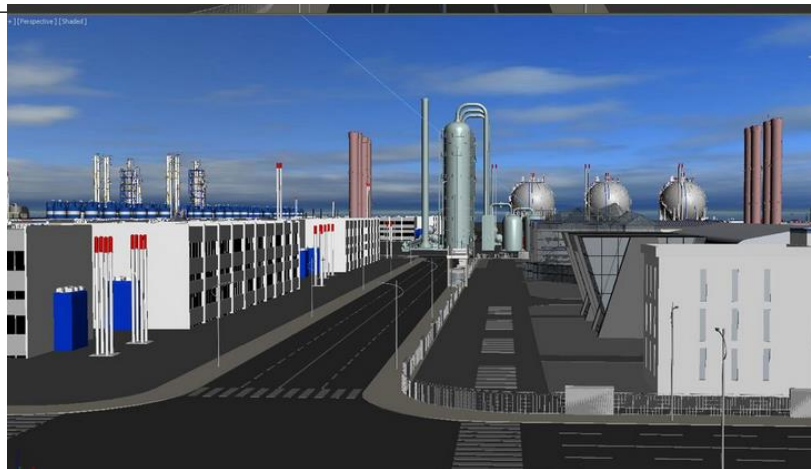
- OpenGL



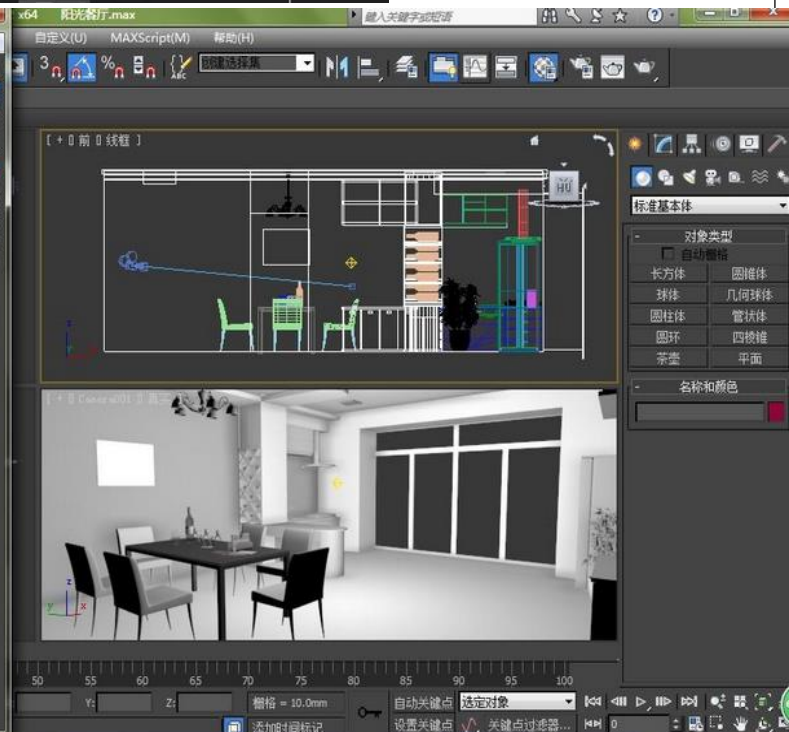
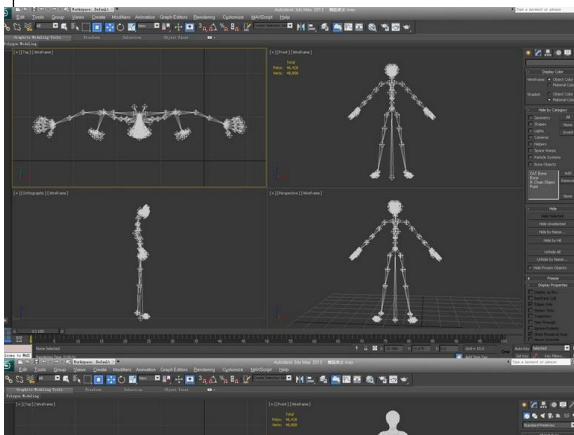


3DMax

- Modelling
- Raying
- Rendering



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Unity3D



- Game engine, 游戏引擎
- 综合型游戏开发工具



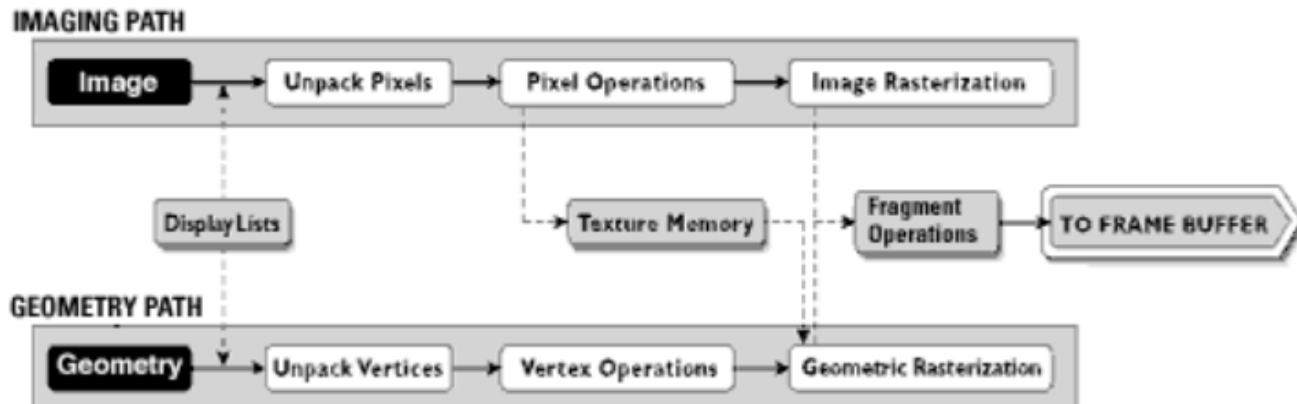
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OpenGL



- 古典派
- The Industry's Foundation for High Performance Graphics
 - from games to virtual reality, mobile phones to supercomputers

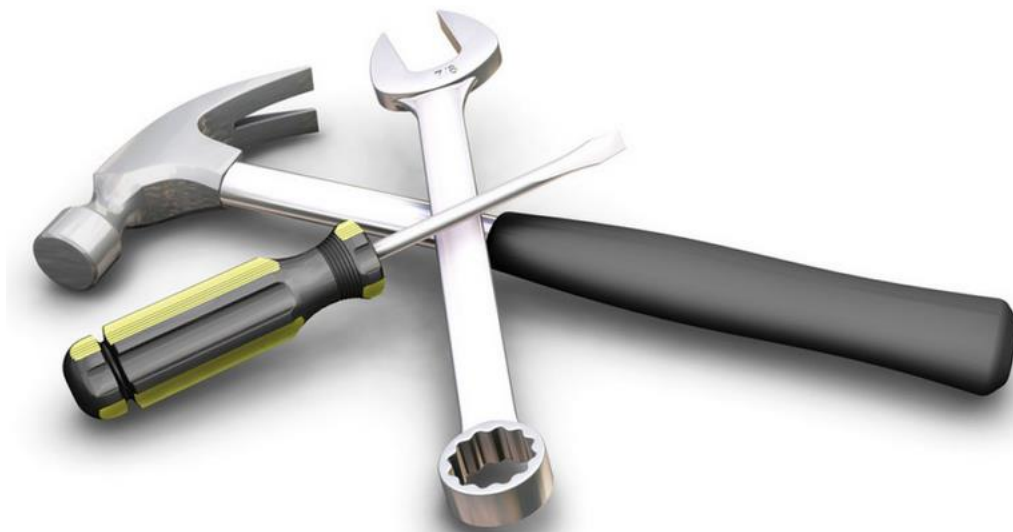


OpenGL operates on image data as well as geometric primitives.



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其他工具

- IntelliJ IDEA



- SVN



TortoiseSVN

- Git



- 项目管理



总结

本节课主要介绍了目前几种主流的软件工具环境，包括开发环境，数字媒体工具，移动开发环境和一些其他工具。

课后要求同学们调研，每人完成一份不少于500字的调研报告，随最后总报告提交。要求如下：

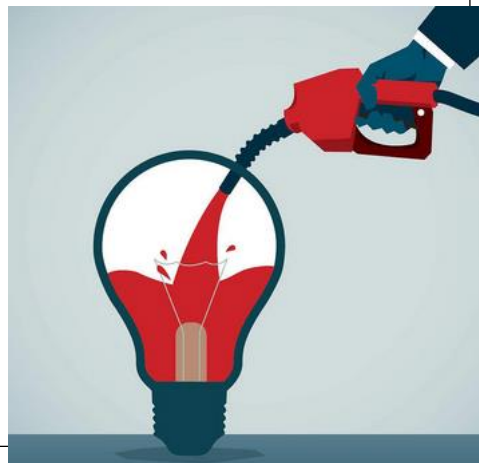
1. 某一种开发工具或数字媒体工具的调研报告，包括其背景，主要功能和特点。
2. 不得直接以课堂介绍VS, Eclipse, NetBean, AS, 3DMAX等为题目进行宏观介绍，但可以深入介绍某一个工具的扩展功能。
3. 要求图文并茂，有截图，真实在自己环境上运行和使用良好。



总结（续）

Tips:

1. 一定要实际动手试一下：下载，安装，hello world!，进阶。。。
2. 调研报告不是堆砌字数，要切中要害或角度独到。





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谢谢！

