

Programming tools on Linux

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Topics

Building software

Students' Needs

Building software

Steps

- Planning
- Coding
- Debugging
- Testing
- Maintaning

Parts of planning

- UML Modelling
- Entity-Relationship diagram
- Network Diagram
- Documentation generation

Stuff for planning

- Dia
- Umbrello
- BOUML Toolbox in Qt
- Gaphor
- TCM (Toolkit for Conceptual Modelling)
- Doxygen
- GNU Plotutils

Coding

- Language
- Algorithm
- Design
- Code Management
- Compiling
- Debugging
- Building

Compilers / Interpreters used

C	gcc
C++	g++
Java	Openjdk, Sun-Jdk, Jikes
Python	Python
Ruby	Ruby
C#.NET	Mono (gmcs)
VB.NET	Mono (vbnc)
PHP	Php-Cli, Php
Pascal	FPC (Free Pascal Compiler)
JSP	Tomcat, Glassfish

Integrated Development

- Code Editor
- Syntax Editor
- Code Folding
- Pretty Printer
- Project Management
- Compiler and Builder / Interpreter
- Debugger
- Version Control

IDE

- Qt (Qdevelop)
- Kdevelop
- Eclipse
- Netbeans
- Code::Blocks w/wxFormBuilder
- Kompozer / Quanta+
- Komodo IDE ^[*]
- Lazarus
- Anjuta w/Glade
- Boa Constructor / Gazpacho / Eric

Code Management

- Version Control
 - Subversion
 - Concurrent Versions System
 - Git
- Terms
 - Import
 - Checkout
 - Update (sync)
 - Commit
 - Trunk

Debugging

- GNU Debugger
 - gdb
 - cgdb
- Data Display Debugger (ddd) / Nemiver
- Mono-Debugger
- Chromium / Firebug
- Bashdb
- Pydb / Eric / Winpdb

Testing

- C/C++ - Unit Test / ++
- Java – testng
- Python – testtools
- PHP – simpletest
- .NET – Nunit

Students' Needs

Course

1)C/C++

2)Visual Basic

3)Microprocessor
simulator

4)Java

5)MATLAB

1)Manual / Geany

2)GAMBAS

3)GNUSim8085

4)JDK (or IDEs)

5)Octave / Scilab

Libraries

- Graphics
 - Libgraph
 - Port of conio.h on SDL
 - Allegro
- Socket Programming
- Multi-Threading
 - PTHREADS
- C++ STL

Thank You!