

Programming Practices (PRP-304)

| Lab | Coding (Linux) | Program Environment (Linux+Windows) | Coding Practices |
|-----|--|---|--------------------------------|
| 1 | Set union and find operations | Installing software from source code/binary packages, software construction tools | |
| 2 | Simple string matching | Run HTTP/HTTPS/FTP services , doxygen | Working with classes |
| 3 | Floyd-Warshall's algorithm | Basic HTML, CSS, XML, PHP, PHP-templates (with simple mySQL queries, forms) | Creating high quality routines |
| 4 | BFS and DFS searches using queue/stack | GUI basics: Multi-frame for forms, calculator using win32 (for Windows) and Qt (Linux+Windows) | Defensive programming |
| 5 | Backtracking: 8-queen problem | Automated sequence of jobs | Pseudocode programming |
| 6 | Tables, Information, Memoization | Links, Bazaar VCS | Using variables – 1 |
| 7 | Hashing | Threads | Using variables – 2 |
| 8 | Simple string manipulations | Daemons and services | Fundamental data types |
| 9 | Linked lists stored in a binary tree | Signals | Unusual data types |
| 10 | Trie trees (insert, find, delete) | File truncation, file size information, setting file attributes, random record updates, file locks | Organizing code |
| 11 | AVL (insert, find, delete) | Create and use library files | Using conditionals |
| 12 | RB-tree (insert, find, delete) | Simple shell scripting using sed, awk, wget, grep, curl, crontab, cut, imagemagick, ping, rsync, ssh, sftp, etc. (Linux only) | Unusual code structures |
| 13 | B+-tree (insert, find, delete) stored in a binary tree | | |