**COMP2113 Exam Cheat Sheet**

*Module 1 Linux Environment*

ls, cd ~username, man **x**, mkdir, rmdir, cp, rm -rf, mv, touch, cat, vi, cat >

chmod: rwx, ugoa, +-=

diff: **a**dd a line after line **0** of *fileA*, the line to be added is line **1** of *fileB*; **c**hange line **2,3** of *fileA* to line **3** of *fileB*; **d**elete line **1** from *fileB*, and the files will then be in sync starting at line.

cut -d-f, wc (-line, -word, -byte), sort -n-r-k-t, uniq, spell, su, yum, man cmd

find: [path][-name][-type f/d]

grep: .^$ ?+\* [] \ (){n,m} -E‘ ’

Redirection&Pipe

>: send into a file >>: append

>|: force to be written, 2>&1

0: input 1: output 2: error output

<: Input |: output 🡪 Programm

*Module 2 Shell Script*

#!/bin/bash

chmod u+x [program]

./[program]

variable: read $ \`command`

count: ${#a}

part: ${a:pos:len}

substitute: ${a/from/to}

let: math operation

script\_name: $0 $#

if-else-fi: exist, success, error

compare: string, check, number

for loop

delete: >/dev/null

replace: echo “$0: Oops”>&2

*Module 3 C++*char, int, double, bool

cout << “ “ << endl

cin >> ;

if ( ) {;} else {;} / condition ? expr1 : expr2

else if

switch (control) { case 1: statement; break; default: statement; } / {case 0: case 1: case 3: statement; break;

while (condition) {statement; }

loop variable: to count the no. of iterations

initialization: of loop variable

condition: for continuation

updating of loop variable inside the loop body

Sentinel-controlled, Counter-controlled, Flag-controlled

for (initialization; condition; updating) { statement\_1;

...; statement\_n;}

break, continue