

WESTERN UNIVERSITY
Computer Science 3357a – Fall 2015
Assignment 1 Marking Scheme

Student Username: gsingh95
Marked By: Chesakov, Egor
Submitted On: October 13, 2015

Client (35%)

Criterion	Mark	Out Of	Comments
Compilation and Execution			
If code does not compile or run properly, read the code and mark as much as you can.	-13	Compiles/runs successfully: 0 Wholly incorrect output/crashes often: -13 Compiles; crashes immediately: -20 Does not compile: -24	
Makefile			
Makefile provided	1	1	
Builds code simply by typing make	1	1	
Builds executable named client	1	1	
Makefile uses the --Wall and --Werror flags when compiling code (if they have defined CFLAGS, don't just look at its definition: make sure they're <i>using</i> it in their compilation commands)	2	2	
Command-Line Arguments			
Accepts directory	1	1	
Accepts output filename	1	1	
Prints error upon missing arguments	0	1	No error message
Prints error if invalid directory given	0	1	Cannot open directory 'bar' Segmentation fault
Prints error if invalid filename given (e.g. a directory name)	0	1	Segmentation fault
Accepts directory given without trailing slash	2	2	
Accepts directory given with trailing slash	2	2	

Criterion	Mark	Out Of	Comments
Output			
Writes to output file specified on command line	1	1	
Overwrites existing output file (does not append to file)	1	1	
Output file in correct format (one filename, checksum pair per line)	2	2	
Output file contains correct number of unique, non-hidden files	4	4	
Output file includes hidden files	1	1	
Output file contains correct filenames	3	3	
Output file does not contain duplicates	2	2	
Output file contains paths specified relative to the Hooli root	0	3	Path does not appear to be relative to the root ./client foo test.txt /checksum.c,2862082466
Output file contains correct checksums	3	3	
Output file represents checksums in decimal	1	1	
Program prints nothing to the screen on successful execution	1	1	
Program exits with return code of 0 on successful execution (EXIT SUCCESS)	1	1	
Program exists with return code of 1 on failed execution (EXIT FAILURE)	1	1	
Program does not crash on single file error (e.g. permissions problem)	0	2	Segmentation fault
Efficiency			
Does not read entire file into memory all at once to compute checksum (look at their source)	0	2	
Does not produce memory errors (e.g. double free or corruption; invalid next size; etc.)	2	2	
Keeps output file open until directory scanning complete (does not open-write-close for each file – look at their source)	0	2	
Frees dynamically-allocated memory (run valgrind and check for memory leaks)	0	2	==14150== LEAK SUMMARY: ==14150== definitely lost: 7,389 bytes in 6 blocks ==14150== indirectly lost: 0 bytes in 0 blocks ==14150== possibly lost: 0 bytes in 0

			blocks ==14150== still reachable: 0 bytes in 0 blocks ==14150== suppressed: 0 bytes in 0 blocks
Program is capable of handling a large directory tree	2	2	
<i>Client Total</i>	23	50	

libhdb (45%)

Criterion	Mark	Out Of	Comments
Compilation and Execution			
If code does not compile or run properly, read the code and mark as much as you can.	0	Compiles/runs successfully: 0 Had to be modified to compile/run successfully: -10 to -20 Wholly incorrect output/crashes often: -13 Compiles; crashes immediately: -20 Does not compile: -24	
Library			
Passes unit tests	30	30 (1 mark per test)	
Makes efficient use of Redis commands (e.g. doesn't use 3 commands for an operation that only requires 1)	3	3	
Does not print anything to the screen	2	2	
Did not modify <code>hdb.h</code>	1	2	<pre>> /* > Author: Gurpreet Singh > Description: This is the header file > containing definations for the hdb.c file > */ > > 4a10 > #include <hiredis/hiredis.h></pre>
Efficiency			
Frees dynamically-allocated memory (run <code>valgrind</code> and check for memory leaks)	3	3	
libhdb Total	39	40	

Style and Comments (20%)

All criteria in this section to be marked using the following scale:
Never to almost never: 0; Rarely: 1; Sometimes: 2; Usually to Always: 3

Criterion	Mark	Out Of	Comments
Comments			
Code contains inline comments allowing reader to follow algorithm	3	3	
Variable declarations commented	3	3	
Header comment in each file with the appropriate information	3	3	
Comments are descriptive and do not simply repeat what the code is saying	3	3	
Attention paid to spelling, grammar, punctuation, capitalization	3	3	
Files devoid of code that is commented out	3	3	
Style			
Uses descriptive variable names	3	3	
Uses descriptive function names	3	3	
Uses constants instead of magic numbers	1	3	char full_path[1024]; char tempname[1024]; char* formattedname = malloc(1024);
Functions kept to a reasonable length	3	3	
Code is modular and divided into multiple files, where appropriate	3	3	
Lines kept to a reasonable length (80 - 100 chars)	3	3	
Code is clean and well-formatted	3	3	
Appropriate use of whitespace	3	3	
Does not use global variables (give 0 here for ANY use of a global variable)	3	3	
Style and Comments Total	43	45	

Submission Errors (up to 5% off)

Criterion	Deduction	Out Of	Comments
Submission not tagged <code>asn1</code>	-1	-3	Should be <code>asn1</code> , not <code>ASN1</code>
Directories <code>client</code> and <code>hdb</code> not found in <u>root</u> of repository	0	-2	
Submission contains disallowed files	0	-1 per file (max. -3)	
Submission missing required files	0	-1 per file (max. -3)	
Total Deductions	-1	Max. -5	

Evaluation Summary

Section	Mark	Out Of	Weight	Weighted Mark (round up to nearest integer)
Client	23	50	35%	17
libhdb	39	40	45%	44
Style and Comments	43	45	20%	20
Subtotal				81
- Submission Errors (max. -5)				-1
- Late Penalty no penalty if submitted by 23:59:59 on October 13 10% penalty by 4 PM on October 14 do no mark after 4 PM on October 14				0
Total (out of 100)				80

Comments