

Component	Grade 70 +
<b>F1 - System Architecture including makefile (10%)</b>	Program follows excellent design principles and demonstrates the proper implementation in the application.
<b>F2 - Daemon (Setup/initialisation/Management::5%)</b>	Daemon setup using an init script implementing the singleton pattern and using header files to store configurable variables. The init script can be used to start/stop the daemon.
<b>F3 - Daemon (Implementation::10%)</b>	Background process created and completely decoupled from Terminal and IO. Appropriate error checking and signals used.
<b>F4 - Backup Functionality (10%)</b>	Backups architected and implemented correctly and fit for purpose in a commercial environment.
<b>F5 - Transfer Functionality (10%)</b>	Transfers architected and implemented correctly and fit for purpose in a commercial environment.
<b>F6 - Lockdown directories for Backup / Transfer (5%)</b>	The directories are completely locked down during the backup / transfer process and reverts to standard permissions when the process is complete.
<b>F7 - Process management and IPC (IPC::10%)</b>	Very good usage of the exec() family of functions replaces the current process image with a new process image.
<b>F8 - Logging and Error Logging (15%)</b>	Error logging and implemented correctly for all aspects of the program.
<b>F9 - Documentation (20%)</b>	The documentation is well written and clearly explains all architectural choices and functionality of the system
<b>F10 - Exemplar Video (5%)</b>	Video is well prepared and shows and describes the exact operation of the solution. Complex aspects of the solution have been described in good detail and within the 5-minute maximum.

## Grade 69 – 60

Program follows good excellent design principles and demonstrates the proper implementation in the application.

Demon configuration complete with setup / initialization / management included. Some additions needed for a real world server solution.

Background process created and completely decoupled from Terminal and IO.

Backups implemented and working correctly. Some additions needed for a real world solution.

Transfers implemented and working correctly. Some additions needed for a real world solution.

The directories are completely locked down during the backup / transfer process and reverts to standard permissions when the process is complete. Some minor issues with the implementation or operation of the solution.

Good usage of the system()/exec() family of functions replaces the current process image with a new process image.

Error logging implemented correctly for all most of the program.

The documentation is well written. Could have explained the code and the principle in more detail.

Video is well prepared and shows and describes the exact operation of the solution and within the 5-minute maximum.

## Grade 59 – 50

Program follows good design principles and demonstrates the proper implementation in the application. Solution contains architectural design flaws and/or demonstrates some principles separate from the application.

Daemon setup is operational and working correctly. Some features omitted or not working as expected.

Process created. Some issues with the process running in background or with decoupling from Terminal and IO.

Backups working correctly. Some features omitted or not working as expected.

Transfers working correctly. Some features omitted or not working as expected.

The directories are completely locked down during the backup / transfer process and reverts to standard permissions when the process is complete. Some features omitted or not working as expected.

Good usage of the `system()`/`exec()` family of functions replaces the current process image with a new process image. Some features omitted or not working as expected.

Error logging implemented correctly for some aspects of the program.

The documentation is acceptable. Could have explained the code and the principle in more detail. Omissions of content or misinterpretation of the principle demonstrated.

The video is acceptable. Could have explained the code and the solution in more detail. Minor omissions of content or detail in the video demonstration and within the 5-minute maximum.

## Grade 49 – 40

Program demonstrates a minimal implementation of design principles. Solution contains architectural design flaws, tight coupling and/or demonstrates principles separate from the application.

Minimal setup / initialization / management offered to control the operation of the daemon. Some configuration options provided for in the solution.

Process operates, some of the following not working: not in background, still linked to terminal, issues with file permissions and IO.

Some aspects of the backups operates, minimal attempt.

Some aspects of the transfers operates, minimal attempt.

The implementation of the lockdown is provided but not operating as expected. Major omissions and/or not operating as expected.

Minimal use of forking to facilitate additional functionality running is a different process.

Minimal Error logging implemented in the program.

The documentation is minimal or not focused on the problem description. Could have explained the code and the principle in more detail. Omissions of content or misinterpretation of the principles demonstrated.

The video is minimal or not focused on the problem description. Could have explained the code and the solution offered in more detail. Omissions of content or detail in the video demonstration.

Program does not demonstrate the operation of the design principles. Major omissions and lack of understanding of design in the Linux environment.

Minimal or no setup / initialization / management offered to control the operation of the daemon.

Damon process does not operate or does not operate as expected.

No backups implemented correctly or not fit for purpose.

No transfers implemented correctly or not fit for purpose.

Minimal implementation and not fit for purpose.

Minimal implementation and not fit for purpose.

No error logging implemented correctly for all aspects of the program or not fit for purpose.

The documentation is simply comments embedded in the code and does explain the code or the principle. Minimal attempt in all aspects.

Video doesn't capture the operation of the solution and/or doesn't offer a verbal description of the functionality of the system from a code perspective.

---