

2018A Lab: Download Manager - Grading Sheet

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CODE	Description	Grade
Base-0	Qualifying requirements: 1. The code compiles and runs using Java 8 2. Not using a library for core features 3. Not using external libraries 4. Downloads the file mentioned in the example properly (MD5: 229c0c5a0d1b797ce1e0ce2557e93e3b): java IdcDm "https://archive.org/download/Mario1_500/Mario1_500.avi"	Failing Base-0 == grade 0
RD-0	Signal termination handling: The application handles termination by a signal and resumes from where it was stopped, i.e.: 1. java IdcDm "https://archive.org/download/Mario1_500/Mario1_500.avi" 2. Ctrl+c after some % downloaded 3. java IdcDm " https://archive.org/download/Mario1_500/Mario1_500.avi " 4. Check resulted file MD5	20
RD-1	Multiple signal termination handling: same as RD-0, just kill the process 3 times.	10
RD-2	Network failure handling: same as RD-0, but disconnect the network for a while (1-2 minutes)	10
RD-3	Metadata files left on disk after a successful download	-10
RD-4	Metadata file are larger than 1/000 of the original file size, i.e.: 24kb	-10
MC-0	Multiple connections: The application can download using multiple connections: 1. java IdcDm " https://archive.org/download/Mario1_500/Mario1_500.avi " 8 2. Validate number of connections using 'netstat'	15

	3. Check resulted file MD5 4. Verify in the code that each connection downloads a different range	
MC-1	Multiple connections and error handling: same as RD-1 but with 8 multiple connections	8
MC-2	Multiple connections and error handling: same as RD-1 but with different number of multiple connections each time	7
RL-0	Rate limiting: The application supports download rate limiting, i.e.: 1. <code>java IdcDm</code> <code>"https://archive.org/download/Mario1_500/Mario1_500.avi"</code> <code>1 10000</code> 2. Validate download rate using the (TaskManager/ActivityMonitor) 3. Check resulted file MD5	15
RL-1	Rate limiting and Multiple connections: like RL-0 but with multiple connections	15
Base-1	Readability: there are undocumented constants in the code (badly named and without a comment)	-10
Base-2	Error handling: an unhandled exceptions raised in the tests above	-10
Base-3	Compilation: the code compiles with warnings on Java 8	-10