Relay :

Si No	Test Case	Type	Status	Comments
1	Search for a file that is served by the last peer	Positive	Pass	
2	Search for the same file, now Indexing should be quicker as it gets cached	Positive	Pass	
3	Search for a file served by many peers	Positive	Pass	
4	Search for a file which is not served by any peer	Negative	Pass	Proper message that file is not served by any peer is displayed
5	Multiple clients start requesting for the same file parallely	Positive	Pass	

Star

Si No	Test Case	Type	Status	Comments
1	Search for a file that is served by ONLY on peer	Positive	Pass	
2	Search for the same file, now Indexing should be quicker as it gets cached	Positive	Pass	
3	Search for a file served by many peers	Positive	Pass	
4	Search for a file which is not served by any peer	Negative	Pass	Proper message that file is not served by any peer is displayed
5	Multiple clients start requesting for the same file parallely	Positive	Pass	

Mesh

Si No	Test Case	Type	Status	Comments
1	Search for a file that is served by ONLY on peer	Positive	Pass	
2	Search for the same file, now Indexing should be quicker as it gets cached	Positive	Pass	
3	Search for a file served by many peers	Positive	Pass	
4	Search for a file which is not served by any peer	Negative	Pass	Proper message that file is not served by any peer is displayed
5	Multiple clients start requesting for the same file parallely	Positive	Pass	

Functionality Test Cases :

Test Case	Type	Status	Comments
Start peer with no args	Negative	Pass	It displays the correct usage to console
Start peer with less than 3 arguments	Negative	Pass	It displays the correct usage to console
Start peer when index server not running	Negative	Pass	It error's out that index server is not running
Start peer and share a non existing directory	Negative	Pass	This is not handled currently
Start peer and share a dir / register	Positive	Pass	Every file registered is logged to the console
Add / delete files in the share dir and re register	Positive	Pass	File index is updated and logged to console
Use IP of the index server instead of DNS	Positive	Pass	
Start index server	Positive	Pass	
Start peer client with no arguments	Negative	Pass	It displays the correct usage to console
Start peer client with less than 3 args	Negative	Pass	It displays the correct usage to console
Start peer client with 3 args including -f	Negative	Pass	It displays the correct usage to console
Start peer client with -x option	Negative	Pass	It displays the correct usage to console
Start peer client when index server is down	Negative	Pass	It error's out that index server is not running
Query for a file which is not indexed by any peer	Negative	Pass	Message is logged to console
Query for a file which is not indexed by any peer with -f	Negative	Pass	Message is logged to console
Query for a file which is registred by more than 2 peers	Negative	Pass	Message is logged to console
Enter a invalid peer no	Negative	Pass	It loops again and asks for a valid entry
Enter a peer who is down	Negative	Pass	It attempts to fetch from the next peer listed until max attempts is reached
Enter the last peer and it should be down	Negative	Pass	It attempts to fetch from the first peer listed until max attempts is reached
Try max_attemps - all serving peers down	Negative	Pass	
Try -f option	Positive	Pass	
Try fetching a file which is indexed and deleted on the server	Negative	Pass	Message is logged to console

Performance Test Cases :

Si No	Test Case
1	A peer client doing 1000 sequential transfers of file 1.1K
2	A peer client doing 1000 sequential transfers of file 2.1K
3	A peer client doing 1000 sequential transfers of file 4.2K
4	A peer client doing 1000 sequential transfers of file 8.3K
5	A peer client doing 1000 sequential transfers of file 11K
6	2 peer client doing 1000 sequential transfers of a file 4.3K parallel
7	4 peer client doing 1000 sequential transfers of a file 4.3K parallel
8	3 peer client doing 10 transfers of a file 512K parallel

** PS : The results of Performance Test Cases are available in Results.{odt,pdf}. The corresponding log file is available test_log folder in the source code