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Manual to run the application

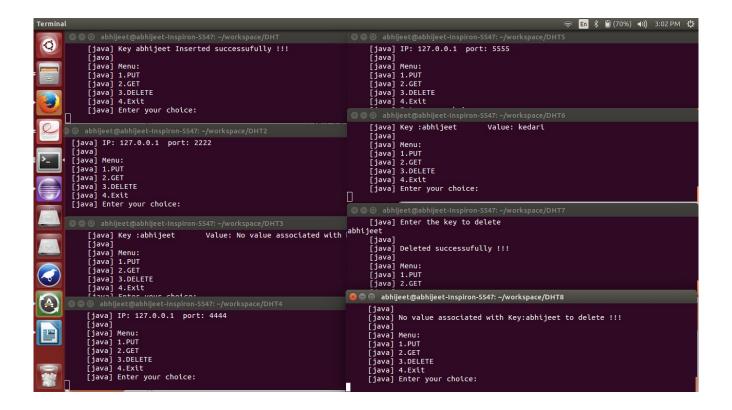
For Client/Server

- 1) Copy the folder DHT on peer machine. (if you have copy this folder on 8 different location)
- 2) Open the folder DHT
- 3) Open the config.properties file and update below two lines with own IP Address and own port respectively.

```
Example-
ip = 127.0.0.1
port=1111
```

Similarly update other entries like (ip0,port0), (ip1,port1), (ip2,port2), (ip3,port3),(ip4,port4), (ip5,port5),(ip6,port6),(ip7,port7),(ip8,port8) with peer IP and Peer port from 1 to 8th. Note that Own IP and own Port we entered initially should be one of the (ip0, port0) to (ip8,port8).

- 4) Open the terminal and navigate inside DHT folder (you have to open 8 instances of terminal on same machine or different machine, depends on where you are executing code).
- 5) Type the command **ant** (on all terminal)



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How to Test the application

On client as a Peer side:

- 1. Press "1" to Put the Key and value on Server Hash Table
 - 1.1 After pressing "1" peer will ask you enter the Key to insert
 - 1.2 It will validate if Key is not NULL or Empty or Greater than 24 bytes
 - 1.3 if it is then it will ask user to re-enter the Key
 - 1.4 If it is valid input for Key, then peer will ask for Value associated with Key.
 - 1.5 It will validate if Value is not NULL or Empty or Greater than 1000 bytes
 - 1.6 if it is then it will ask user to re-enter the Value
 - 1.7 If it is valid input for Value, then peer will calculate the hash value and will insert Key-Value pair into appropriate server Hash Table, User will not come to know on which server it has been stored.
- 2. Press "2" to Get the value from Server Hash Table
 - 2.1 After pressing "2" peer will ask you enter the Key
 - 2.2 After entering the Key, Hash function will calculate the server who could contain that key.
 - 2.3 If Key is present on that server then it will return value associated with that Key.
 - 2.4 If not then it will simply return the "No value associated with key"
- 3. Press "3" to Delete the value from Server Hash Table
 - 3.1 After pressing "3" peer will ask you enter the Key
 - 3.2 After entering the Key, Hash function will calculate the server who could contain that key.
 - 3.3 If Key is present on that server then it will delete the Key-Value pair from that server.
 - 3.4 If not then it will simply return the "No value associated with key: to delete"