

# 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 8<sup>th</sup>.

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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Terminal
abhiijeet@abhiijeet-Inspiron-5547: ~/workspace/DHT
[java] Key abhiijeet Inserted successfully !!!
[java] Menu:
[java] 1.PUT
[java] 2.GET
[java] 3.DELETE
[java] 4.Exit
[java] Enter your choice:

abhiijeet@abhiijeet-Inspiron-5547: ~/workspace/DHT2
[java] IP: 127.0.0.1 port: 2222
[java] Menu:
[java] 1.PUT
[java] 2.GET
[java] 3.DELETE
[java] 4.Exit
[java] Enter your choice:

abhiijeet@abhiijeet-Inspiron-5547: ~/workspace/DHT3
[java] Key :abhiijeet Value: No value associated with abhiijeet
[java] Menu:
[java] 1.PUT
[java] 2.GET
[java] 3.DELETE
[java] 4.Exit
[java] Enter your choice:

abhiijeet@abhiijeet-Inspiron-5547: ~/workspace/DHT4
[java] IP: 127.0.0.1 port: 4444
[java] Menu:
[java] 1.PUT
[java] 2.GET
[java] 3.DELETE
[java] 4.Exit
[java] Enter your choice:

abhiijeet@abhiijeet-Inspiron-5547: ~/workspace/DHT5
[java] IP: 127.0.0.1 port: 5555
[java] Menu:
[java] 1.PUT
[java] 2.GET
[java] 3.DELETE
[java] 4.Exit

abhiijeet@abhiijeet-Inspiron-5547: ~/workspace/DHT6
[java] Key :abhiijeet Value: kedari
[java] Menu:
[java] 1.PUT
[java] 2.GET
[java] 3.DELETE
[java] 4.Exit
[java] Enter your choice:

abhiijeet@abhiijeet-Inspiron-5547: ~/workspace/DHT7
[java] Enter the key to delete
abhiijeet
[java] Deleted successfully !!!
[java] Menu:
[java] 1.PUT
[java] 2.GET

abhiijeet@abhiijeet-Inspiron-5547: ~/workspace/DHT8
[java] No value associated with Key:abhiijeet to delete !!!
[java] Menu:
[java] 1.PUT
[java] 2.GET
[java] 3.DELETE
[java] 4.Exit
[java] Enter your choice:
  
```

## 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 ”