Procedure for executing:

1. Open the Cygwin terminals as an administrator in Windows OS.
2. Open 7 terminals - 4 routers and 3 hosts (For the given configuration) .
3. In order to make the execution easier we are attaching the .exe files as the Makefile compilation requires the installation of boost libraries etc.
4. For compiling the given code , please modify the directories of the boost libraries in the makefile.
5. From the host terminal execute the following command:
    a. /host.exe Host_Number Receiving_Port Sending_Port Remote_Port

    Example:

    a. /host.exe 1 4000 4001 5000

HostNumber	SendingPort	Receiving Port	Remote Port
1	4001	4000	5000
2	4003	4002	5008
3	4005	4004	5004

    b. On executing the above command , the following menus are displayed

        i. GET – Fetching the required content
        ii. PUT- Providing the content
        iii. DEL- Deleting a required content.

    c. The following command is to be given to perform any one of the above operation

        GET

        <Content-ID>

        PUT

        <Content-ID>

        DEL

        <Content-ID>

Note: The above commands are case sensitive. Also, content-IDs are integer values. For Example, in order to fetch file 1.txt, only content-ID 1 is to be entered.

The configuration file for a router can be interpreted as follows:-

Configuration File	Router ID	Number of Interfaces	Receiving Ports	Sending Ports	Remote Ports
router1.txt	1	3	5000 5001 5002	6000 6001 6002	4000 7000 5006

Sample Topology Setup.

1. In the separate terminals for ROUTER, execute the following command separately on each terminal:
    a. ./router.exe router1.txt
    b. ./router.exe router2.txt
    c. ./router.exe router2.txt
    d. ./router.exe router4.txt

2. In the separate terminals for HOSTS, execute the following command separately on each terminal:

    a. ./host 1 4000 4001 5000
    b. ./host 2 4002 4003 5008
    c. ./host 3 4004 4005 5004

3. In the **Host 3 terminal** put contentID 1.
    a. PUT <press enter>
    b. 1 <press enter> (is means to put contentID 1 in the host)
    c. You would see the routing tables getting updated.
    d. Now put another content in host 3
    e. PUT <press enter>
    f. 2
    g. You would see the routing tables getting updated.

4. In the **Host 2 terminal** put contentID 1.
    a. PUT <press enter>
    b. 1 <press enter> (is means to put contentID 1 in the host)
    c. You would see the routing tables getting updated.

    Now the sample topology given is ready.

5. Now **Host 1 would get content 1 or 2 from Host 3**
    a. In the Host 1 terminal
    b. GET <press enter>
    c. 1 <press enter>
    d. It would update the pending request tables across its path of propagation.
    e. You could **see the in the HOST 3 terminal** that it **sends content**.
    f. Once the **content is received** by Host 1 , it would be **saved as 1r.txt** in the same folder.
    g. You can use diff or visually see that the **contents of 1.txt and 1r.txt are same**.

NOTE: This is all just a sample run. Further PUTS and GETS would also work. It would also work if a new router / host is added during runtime. And it works on a diff topology too.