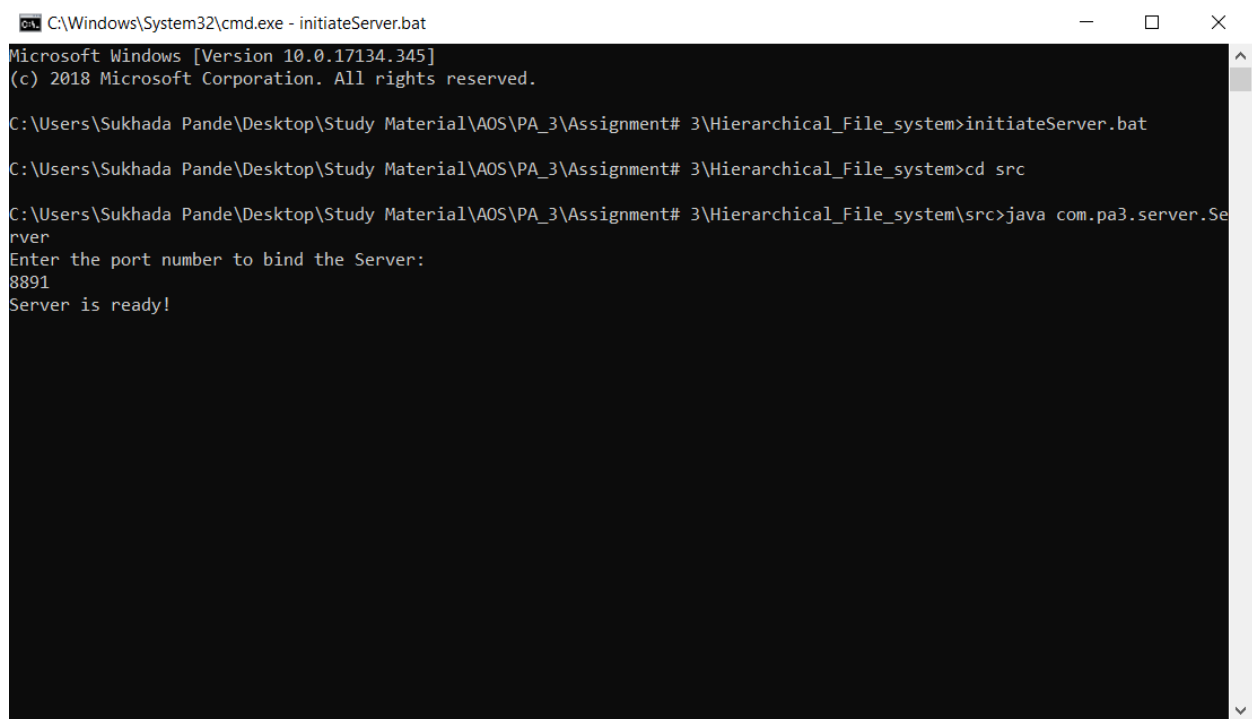


Programming assignment # 3 (Output File)

1. Server running(Super-peer):



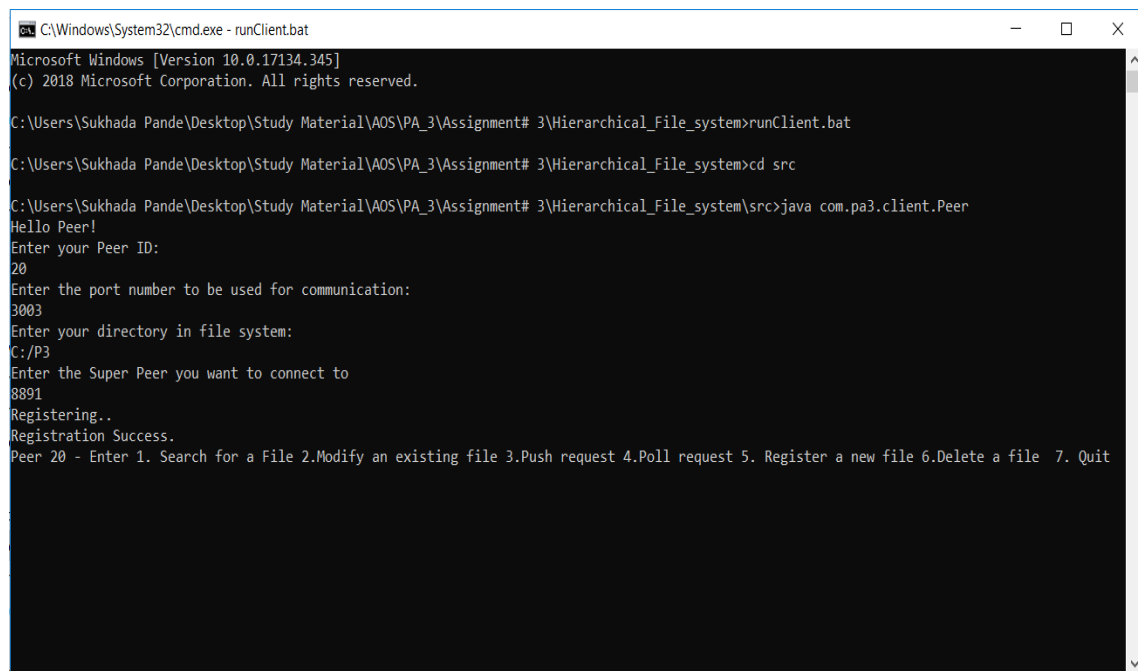
```
C:\Windows\System32\cmd.exe - initiateServer.bat
Microsoft Windows [Version 10.0.17134.345]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\Assignment# 3\Hierarchical_File_system>initiateServer.bat

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\Assignment# 3\Hierarchical_File_system>cd src

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\Assignment# 3\Hierarchical_File_system\src>java com.pa3.server.Server
Enter the port number to bind the Server:
8891
Server is ready!
```

2. Launching peers:



```
C:\Windows\System32\cmd.exe - runClient.bat
Microsoft Windows [Version 10.0.17134.345]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\Assignment# 3\Hierarchical_File_system>runClient.bat

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\Assignment# 3\Hierarchical_File_system>cd src

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\Assignment# 3\Hierarchical_File_system\src>java com.pa3.client.Peer
Hello Peer!
Enter your Peer ID:
20
Enter the port number to be used for communication:
3003
Enter your directory in file system:
C:/P3
Enter the Super Peer you want to connect to
8891
Registering..
Registration Success.
Peer 20 - Enter 1. Search for a File 2.Modify an existing file 3.Push request 4.Poll request 5. Register a new file 6.Delete a file 7. Quit
```

3. Searching for files with results :

```
C:\Windows\System32\cmd.exe - runClient.bat
C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\Assignment# 3\Hierarchical_File_system>runClient.bat
C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\Assignment# 3\Hierarchical_File_system>cd src
C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\Assignment# 3\Hierarchical_File_system\src>java com.pa3.client.Peer
Hello Peer!
Enter your Peer ID:
20
Enter the port number to be used for communication:
2002
Enter your directory in file system:
C:/P2
Enter the Super Peer you want to connect to
8892
Registering..
Registration Success.
Peer 20 - Enter 1. Search for a File 2.Modify an existing file 3.Push request 4.Poll request 5. Register a new file 6.Delete a file 7. Quit
1
Peer 20 - Enter the file name you want to search for:
P1_1.txt
The file is found in neighbours with port no :
Peer Port No: 1001
Peer id :10
Do you want to download the file 1. yes 2. No?
```

4. Modify file : Peer Output:

```
C:\Windows\System32\cmd.exe - runClient.bat
Microsoft Windows [Version 10.0.17134.345]
(c) 2018 Microsoft Corporation. All rights reserved.
C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system>runClient.bat
C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system>cd src
C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system\src>java com.pa3.client.Peer
Hello Peer!
Enter your Peer ID:
10
Enter the port number to be used for communication:
1001
Enter your directory in file system:
C:/P1
Enter the Super Peer you want to connect to
8891
Registering..
Registration Success.
Peer 10 - Enter 1. Search for a File 2.Modify an existing file 3.Push request 4.Poll request 5. Register a new file 6.Delete a file 7. Quit
2
Peer 10 - Enter the file Name you want to modify:
P1_1.txt
Modified file
Update modified file in neighbouring peers using Push 1. Yes 2.No
```

Super-Peer output.

```
C:\Windows\System32\cmd.exe - initiateServer.bat
Microsoft Windows [Version 10.0.17134.345]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system>initiateServer.bat

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system>cd src

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system\src>java com.pa3.server.Server
Enter the port number to bind the Server:
8891
Server is ready!
Registering Peer 10
Successfully Registered peer 10
Status of existing file : VALID
Version of existinf file :1
New file sucessfully added
old file removed from the list
```

5.Modify file not owned by the super-peer of connected peer:

```
C:\Windows\System32\cmd.exe - runClient.bat
Enter the Super Peer you want to connect to
8893
Registering..
Registration Success.
Peer 30 - Enter 1. Search for a File 2.Modify an existing file 3.Push request 4.Poll request 5. Register a new file 6.Delete a file 7. Quit
1
Peer 30 - Enter the file name you want to search for:
P1_1.txt
The file is found in neighbours with port no :
Peer Port No: 1001
Peer id :10
Do you want to download the file 1. yes 2. No?
1
Enter the peer port from which you want to download the file:
1001
File successfully downloaded !!
Returing peer
Peer 30 - Enter 1. Search for a File 2.Modify an existing file 3.Push request 4.Poll request 5. Register a new file 6.Delete a file 7. Quit
2
Peer 30 - Enter the file Name you want to modify:
P1_1.txt
File not owned by server cannot modify
Peer 30 - Enter 1. Search for a File 2.Modify an existing file 3.Push request 4.Poll request 5. Register a new file 6.Delete a file 7. Quit
```

6. Push approach:

Peer output:

```
C:\Windows\System32\cmd.exe - runClient.bat

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system>runClient.bat
C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system>cd src
C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system\src>java com.pa3.client.Peer
Hello Peer!
Enter your Peer ID:
10
Enter the port number to be used for communication:
1001
Enter your directory in file system:
C:/P1
Enter the Super Peer you want to connect to
8891
Registering..
Registration Success.
Peer 10 - Enter 1. Search for a File 2.Modify an existing file 3.Push request 4.Poll request 5. Register a new file 6.Delete a file 7. Quit
2
Peer 10 - Enter the file Name you want to modify:
P1_4.txt
Modified file
Update modified file in neighbouring peers using Push 1. Yes 2.No
1
File P1_4.txt found in the neighbouring peers invalidated.
Peer 10 - Enter 1. Search for a File 2.Modify an existing file 3.Push request 4.Poll request 5. Register a new file 6.Delete a file 7. Quit
```

Super-peer output:

```
C:\Windows\System32\cmd.exe - initiateServer.bat

Microsoft Windows [Version 10.0.17134.345]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system>initiateServer.bat
C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system>cd src
C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system\src>java com.pa3.server.Server
Enter the port number to bind the Server:
8892
Server is ready!
Registering Peer 20
Successfully Registered peer 20
Loading the config file
Sending request to peerid.1 8891
Time to live 10
File Searched
File found in peer with Port No: 1001
Sending request to peerid.3 8893
Time to live 9
File Searched
Downloaded [P1_4.txt] File added successfully
2
P1_4.txt is of old version :1
```

7.Pull 1 : Super-peer checking version of origin server.

```
C:\Windows\System32\cmd.exe - initiateServer.bat
Microsoft Windows [Version 10.0.17134.345]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system>initiateServer.bat

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system>cd src

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system\src>java com.pa3.server.Server
Enter the port number to bind the Server:
8892
Server is ready!
Registering Peer 20
Successfully Registered peer 20
Loading the config file
Sending request to peerid.1 8891
Time to live 10
File Searched
File found in peer with Port No: 1001
Sending request to peerid.3 8893
Time to live 9
File Searched
Downloaded [P1_1.txt] File added successfully
Its time to refresh P1_1.txt of 20
File out of date removed from the list
```

Result when trying to search file which was in modified peer id: 10 and downloaded in peer id:20.

After modification available only in peer id : 10.

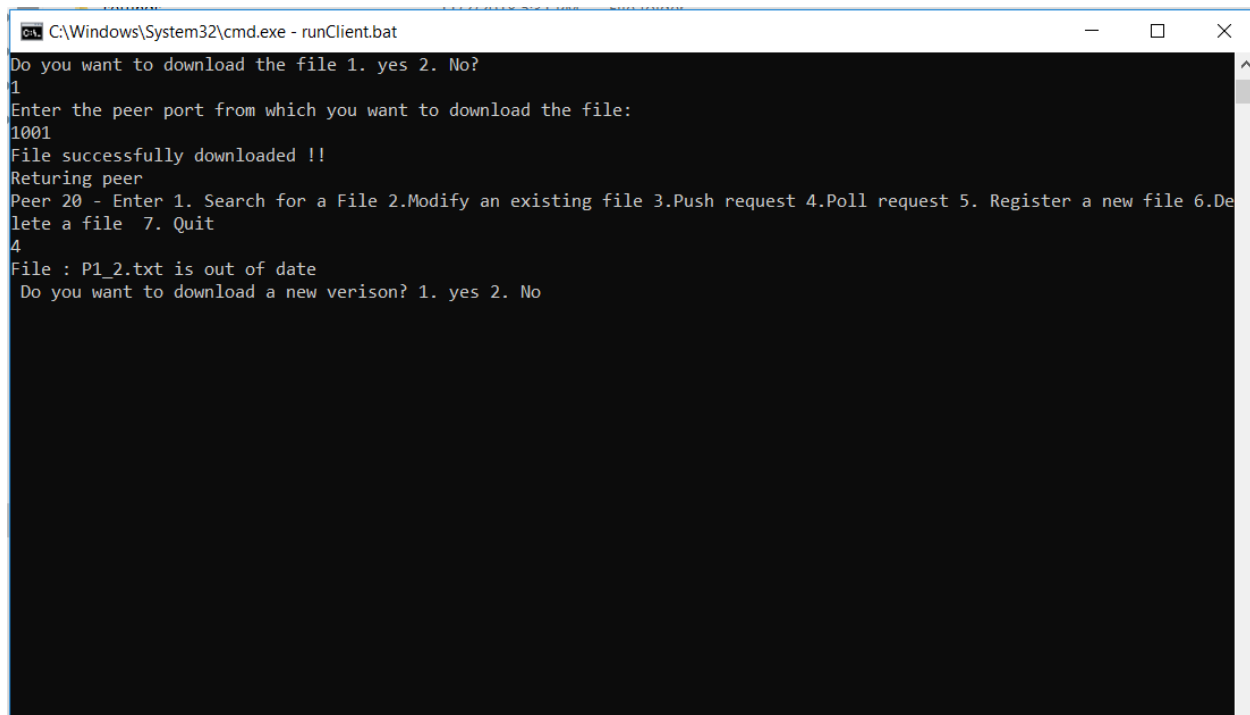
```
C:\Windows\System32\cmd.exe - runClient.bat
Microsoft Windows [Version 10.0.17134.345]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system>runClient.bat

C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system>cd src

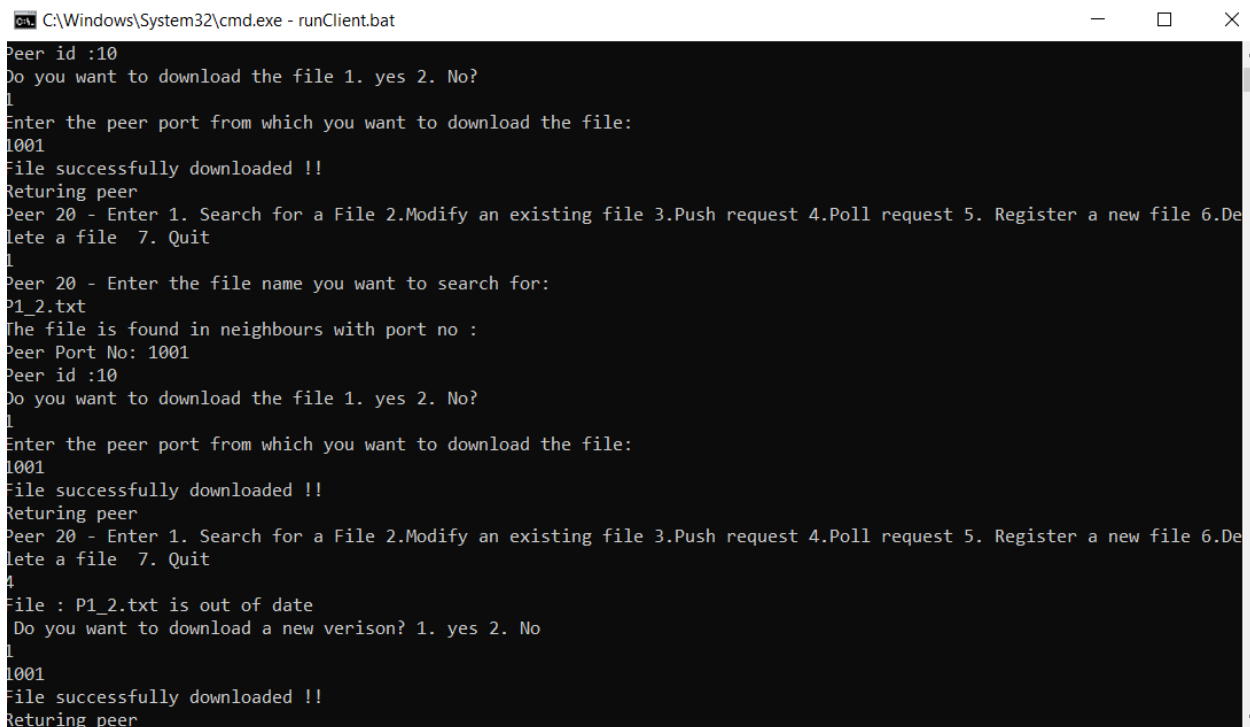
C:\Users\Sukhada Pande\Desktop\Study Material\AOS\PA_3\530_updated\Hierarchical_File_system\src>java com.pa3.client.Peer
Hello Peer!
Enter your Peer ID:
30
Enter the port number to be used for communication:
3003
Enter your directory in file system:
C:/P3
Enter the Super Peer you want to connect to
8893
Registering..
Registration Success.
Peer 30 - Enter 1. Search for a File 2.Modify an existing file 3.Push request 4.Poll request 5. Register a new file 6.Delete a file 7. Quit
1
Peer 30 - Enter the file name you want to search for:
P1_1.txt
The file is found in neighbours with port no :
Peer Port No: 1001
Peer id :10
Do you want to download the file 1. yes 2. No?
```

Pull 2: Peer checking the version of downloaded file across the network with poll request .



```
C:\Windows\System32\cmd.exe - runClient.bat
Do you want to download the file 1. yes 2. No?
1
Enter the peer port from which you want to download the file:
1001
File successfully downloaded !!
Returing peer
Peer 20 - Enter 1. Search for a File 2.Modify an existing file 3.Push request 4.Poll request 5. Register a new file 6.Delete a file 7. Quit
4
File : P1_2.txt is out of date
Do you want to download a new verison? 1. yes 2. No
```

If version changes giving and option to download a new version.



```
C:\Windows\System32\cmd.exe - runClient.bat
Peer id :10
Do you want to download the file 1. yes 2. No?
1
Enter the peer port from which you want to download the file:
1001
File successfully downloaded !!
Returing peer
Peer 20 - Enter 1. Search for a File 2.Modify an existing file 3.Push request 4.Poll request 5. Register a new file 6.Delete a file 7. Quit
1
Peer 20 - Enter the file name you want to search for:
P1_2.txt
The file is found in neighbours with port no :
Peer Port No: 1001
Peer id :10
Do you want to download the file 1. yes 2. No?
1
Enter the peer port from which you want to download the file:
1001
File successfully downloaded !!
Returing peer
Peer 20 - Enter 1. Search for a File 2.Modify an existing file 3.Push request 4.Poll request 5. Register a new file 6.Delete a file 7. Quit
4
File : P1_2.txt is out of date
Do you want to download a new verison? 1. yes 2. No
```