**Practical 1.7**

**Aim:**

Write a java program using java.net library. Client will read the data from a sample file (SampleFile.txt) and send line by line data to Server. Server will reply the same line in capital letters to the client. Client will display that capitalized line on its own screen. (UDP Protocol)

**PROGRAM CODE:**

**UDP Client:**

**import** java**.**net**.\*;**

**import** java**.**io**.\*;**

public class ClientCapitalized**{**

public static void main**(**String args**[]){**

DatagramSocket ds **=** **null;**

int port **=** 10008**;**

String s**;**

**try{**

BufferedReader br **=** **new** BufferedReader**(new** FileReader**(**"SampleFile.txt"**));**

ds **=** **new** DatagramSocket**();**

InetAddress host **=** InetAddress**.**getByName**(**"localhost"**);**

**while(true){**

s **=**br**.**readLine**();**

byte**[]** b **=** s**.**getBytes**();**

DatagramPacket dp **=** **new** DatagramPacket**(**b **,** b**.**length **,** host **,** port**);**

ds**.**send**(**dp**);**

byte**[]** buffer **=** **new** byte**[**1024**];**

DatagramPacket reply **=** **new** DatagramPacket**(**buffer**,** buffer**.**length**);**

ds**.**receive**(**reply**);**

byte**[]** data **=** reply**.**getData**();**

s **=** **new** String**(**data**,** 0**,** reply**.**getLength**());**

echo**(**"\n"**+** s**);**

**}**

**}catch(**NullPointerException ex**){**

System**.**out**.**println**(**"NullPointerException is caught..."**);**

**}**

**catch(**IOException e**){**

System**.**err**.**println**(**"IOException " **+** e**);**

**}**

**}**

public static void echo**(**String msg**){**

System**.**out**.**println**(**msg**);**

**}**

**}**

**UDP Server:**

**import** java**.**net**.\*;**

**import** java**.**io**.\*;**

public class ServerCapitalized**{**

public static void main**(**String args**[]){**

DatagramSocket ds **=** **null;**

**try{**

ds **=** **new** DatagramSocket**(**10008**);**

byte**[]** buffer **=** **new** byte**[**1024**];**

DatagramPacket incoming**=** **new** DatagramPacket**(**buffer**,** buffer**.**length**);**

echo**(**"Server socket created. Waiting for incoming data..."**);**

**while(true){**

ds**.**receive**(**incoming**);**

byte**[]** data **=** incoming**.**getData**();**

String s **=** **new** String**(**data**,** 0**,** incoming**.**getLength**());**

echo**(**"\n"**+** s**);**

s **=** "\n" **+** **(**s**.**toUpperCase**());**

DatagramPacket dp **=** **new** DatagramPacket**(**s**.**getBytes**()** **,** s**.**getBytes**().**length **,** incoming**.**getAddress**()** **,** incoming**.**getPort**());**

ds**.**send**(**dp**);**

**}**

**}**

**catch(**IOException e**){**

System**.**err**.**println**(**"IOException " **+** e**);**

**}**

**}**

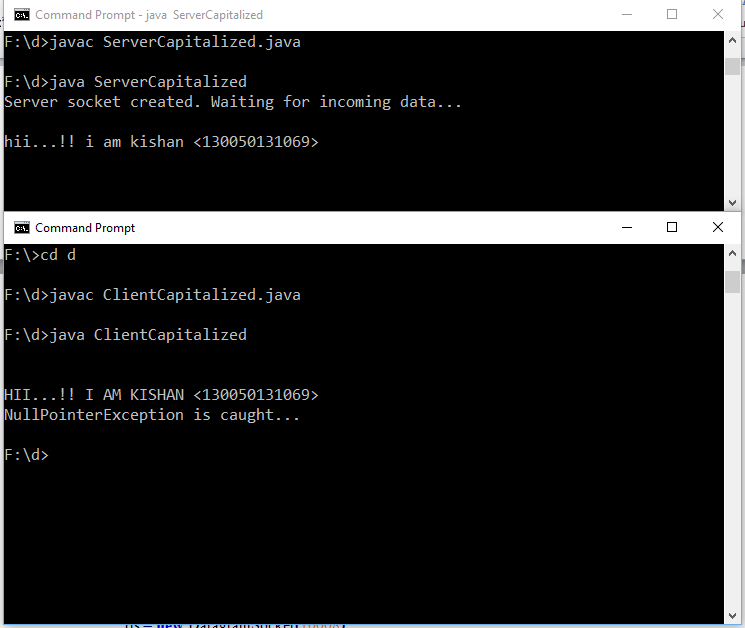
public static void echo**(**String msg**){**

System**.**out**.**println**(**msg**);**

**}**

**}**

**Input Output:**

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