**a. UDP Client and server application to reverse the given input sentence 2018-2019 173.**

**Program:**

**Client:**import java.io.\*;

import java.net.DatagramPacket;

import java.net.DatagramSocket;

import java.net.InetAddress;

public class ClientReverse {

public static void main(String[] args) throws Exception{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

DatagramSocket clientSocket = new DatagramSocket();

InetAddress IPAdress = InetAddress.getLoopbackAddress();

byte [] sendData = new byte[1024];

byte [] receiveData = new byte[1024];

String str = br.readLine();

sendData = str.getBytes();

DatagramPacket dgp = new DatagramPacket(sendData,sendData.length,IPAdress,9999);

clientSocket.send(dgp);

dgp = new DatagramPacket(receiveData, receiveData.length);

clientSocket.receive(dgp);

str = new String(dgp.getData());

System.out.println(\"Output: \" + str);

clientSocket.close();

br.close();

}

}

**Server.java:**

import java.net.DatagramPacket;

import java.net.DatagramSocket;

import java.net.InetAddress;

public class ServerReverse {

public static String reverseInt(int num) {

int ans = 0;

while (num > 0) {

ans = ans \* 10 + (num % 10);

num = num / 10;

}

return String.valueOf(ans);

}

public static void main(String[] args) throws Exception {

DatagramSocket dgs = new DatagramSocket(9999);

byte[] receiveData = new byte[1024];

byte[] sendData = new byte[1024];

DatagramPacket dgp;

dgp = new DatagramPacket(receiveData, receiveData.length);

dgs.receive(dgp);

String str = new String(dgp.getData());

System.out.println(\"Data Received: \" + str);

InetAddress IPAddress = dgp.getAddress();

String ans = ServerReverse.reverseInt(Integer.parseInt(str.toString()));

sendData = ans.getBytes();

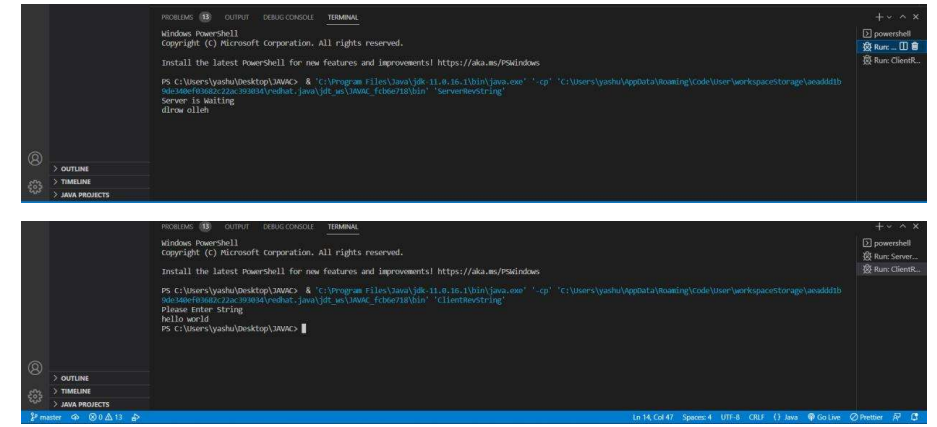
dgp = new DatagramPacket(sendData, sendData.length, IPAddress, dgp.getPort());

dgs.send(dgp);

}

}

**OUTPUT:-**

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