**Socket Programming:**

**Server Program to return the number of Consonants:**

import java.io.\*;

import java.net.\*;

class UDPServer

{

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

{

//char []s=new char[100];

int count=0 ,i;

String Sentence;

DatagramSocket serverSocket = new DatagramSocket(9876);

byte[] receiveData = new byte[1024];

byte[] sendData = new byte[1024];

while(true)

{

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

serverSocket.receive(receivePacket);

Sentence= new String( receivePacket.getData());

System.out.println("Received:\n " + Sentence);

InetAddress IPAddress = receivePacket.getAddress();

int port = receivePacket.getPort();

i=0;

while(Sentence.charAt(i)!='\0')

{

System.out.println("Char"+i+":"+Sentence.charAt(i));

//char =Sentence.charAt(i);

//s=(int)(c);

if(Sentence.charAt(i)=='a' || Sentence.charAt(i)=='e' || Sentence.charAt(i)=='i'|| Sentence.charAt(i)=='o'|| Sentence.charAt(i)=='u' || Sentence.charAt(i)=='A' || Sentence.charAt(i)=='E' || Sentence.charAt(i)=='I'|| Sentence.charAt(i)=='O'||Sentence.charAt(i)=='U')

{

count++;

}

i++;

}

System.out.println("no of consonents are:" + (i-count));

int ans=i-count;

Sentence=Integer.toString(ans);

// String capitalizedSentence = sentence.toUpperCase();

sendData = Sentence.getBytes();

DatagramPacket sendPacket =new DatagramPacket(sendData, sendData.length, IPAddress, port);

serverSocket.send(sendPacket);

}

}

}

**Client Program to Send a word and retrieve output from server:**

import java.io.\*;

import java.net.\*;

class UDPClient

{

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

{

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

DatagramSocket clientSocket = new DatagramSocket();

InetAddress IPAddress = InetAddress.getByName("localhost");

byte[] sendData = new byte[1024];

byte[] receiveData = new byte[1024];

System.out.println("\n Enter a word:");

String sentence = inFromUser.readLine();

sendData = sentence.getBytes();

DatagramPacket sendPacket = new DatagramPacket(sendData, sendData.length, IPAddress, 9876);

clientSocket.send(sendPacket);

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

clientSocket.receive(receivePacket);

String modifiedSentence = new String(receivePacket.getData());

System.out.println("FROM SERVER:NO of consonants are:" + modifiedSentence);

clientSocket.close();

}

}

**Screenshots:**



