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**Class:MCA-5**

**Roll number:13**

**Subject: Network security**

**Sessional 2 Practical**

**P1.java**

import java.net.DatagramSocket;

import java.net.DatagramPacket;

import java.net.InetAddress;

import java.util.Scanner;

class P1{

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

DatagramSocket sender = new DatagramSocket();

DatagramPacket packet = null;

InetAddress ip = InetAddress.getLocalHost();

byte[] send\_packet = new byte[65536];

Scanner in = new Scanner(System.in);

String message="";

while(!message.equalsIgnoreCase("bye")){

System.out.print("Enter number:");

message=in.nextLine();

if(message.equalsIgnoreCase("bye")){

System.out.print("Connection ended!");

break;

}

send\_packet=message.getBytes();

packet = new DatagramPacket(send\_packet,send\_packet.length,ip,1234);

sender.send(packet);

send\_packet=new byte[65536];

}

}

}

**P2.java**

import java.net.DatagramSocket;

import java.net.DatagramPacket;

import java.net.InetAddress;

class P2{

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

DatagramSocket forwarder = new DatagramSocket(1234);

DatagramPacket packet = null;

InetAddress ip = InetAddress.getLocalHost();

byte[] receive\_packet = new byte[65536];

byte[] send\_packet = new byte[65536];

String message="";

while(!message.equalsIgnoreCase("bye")){

packet = new DatagramPacket(receive\_packet,receive\_packet.length);

forwarder.receive(packet);

message=convertToString(receive\_packet);

if(message.equalsIgnoreCase("bye")){

System.out.print("Connection ended!");

break;

}

System.out.print("\nClient:"+message);

if((Integer.parseInt(message)) < 1000){

int number =Integer.parseInt(message);

message =(number\*number)+"";

send\_packet=message.getBytes();

packet = new DatagramPacket(send\_packet,send\_packet.length,ip,2222);

forwarder.send(packet);

}

else

{

System.out.print("\nWarning:Number greater than 1000!");

}

receive\_packet = new byte[65536];

send\_packet = new byte[65536];

}

}

public static String convertToString(byte[] a){

if(a == null)

return null;

String s = "";

int i=0;

while(a[i] != 0){

s=s+(char)a[i];

i++;

}

return s;

}

}

**P3.java**

import java.net.DatagramSocket;

import java.net.DatagramPacket;

import java.net.InetAddress;

import java.util.Scanner;

class P3{

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

DatagramSocket server = new DatagramSocket(2222);

DatagramPacket packet = null;

InetAddress ip = InetAddress.getLocalHost();

byte[] receive\_packet = new byte[65536];

String message="";

while(!message.equalsIgnoreCase("bye")){

packet = new DatagramPacket(receive\_packet,receive\_packet.length);

server.receive(packet);

message=convertToString(receive\_packet);

if(message.equalsIgnoreCase("bye")){

System.out.print("Connection ended!");

break;

}

System.out.print("\nClient:"+message);

receive\_packet = new byte[65536];

}

}

public static String convertToString(byte[] a){

if(a == null)

return null;

String s = "";

int i=0;

while(a[i] != 0){

s=s+(char)a[i];

i++;

}

return s;

}

}





