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End Exam

1. Write a java program for Client Server Communication using UDP Datagram Socket Programming.

*Source Code: For udpBaseClient_2

```
import java.io.IOException;
import java.net.DatagramPacket;
import java.net.DatagramSocket;
import java.net.InetAddress;
import java.util.Scanner;

public class udpBaseClient_2{
public static void main(String args[]) throws
IOException {
Scanner sc = new Scanner(System.in);
DatagramSocket ds = new DatagramSocket();
InetAddress ip = InetAddress.getLocalHost();
byte buf[] = null;
```

```
while (true){
String inp = sc.nextLine();
buf = inp.getBytes();
DatagramPacket DpSend =new
DatagramPacket(buf, buf.length, ip, 1234);
ds.send(DpSend);
if (inp.equals("bye"))
break;
}
}
}
```

***Source Code : For** udpBaseServer_2

```
import java.io.IOException;
import java.net.DatagramPacket;
import java.net.DatagramSocket;
import java.net.InetAddress;
import java.net.SocketException;

public class udpBaseServer_2 {
public static void main(String[] args) throws
IOException {
DatagramSocket ds = new DatagramSocket(1234);
```

```
byte[] receive = new byte[65535];
DatagramPacket DpReceive = null;
while (true) {
DpReceive = new DatagramPacket(receive,
receive.length);
ds.receive(DpReceive);
System.out.println("Client:-" + data(receive));
if (data(receive).toString().equals("bye")) {
System.out.println("Client sent bye.....EXITING");
break;
}
receive = new byte[65535];
}
}
public static StringBuilder data(byte[] a){
if (a == null)
return null;
StringBuilder ret = new StringBuilder();
int i = 0;
while (a[i] != 0) {
ret.append((char) a[i]);
i++;
}
return ret;
 }}
```

udpBaseServer_2.java × udpBaseClient_2.java ×

Source History

```java
/**
 *
 * @Aditi Tarak
 */

import java.io.IOException;
import java.net.DatagramPacket;
import java.net.DatagramSocket;
import java.net.InetAddress;
import java.util.Scanner;

public class udpBaseClient_2
{
        public static void main(String args[]) throws IOException
        {
                Scanner sc = new Scanner(System.in);
                DatagramSocket ds = new DatagramSocket();

                InetAddress ip = InetAddress.getLocalHost();
                byte buf[] = null;

                // loop while user not enters "bye"
                while (true)
                {
                        String inp = sc.nextLine();
                        buf = inp.getBytes();

                        DatagramPacket DpSend =
                                new DatagramPacket(buf, buf.length, ip, 1234);
                        ds.send(DpSend);

                        // break the loop if user enters "bye"
                        if (inp.equals("bye"))
                                break;
                }
        }
}
```

Output ×

Socket (run) #13 × Socket (run) #14 ×

```
run:
Hello
I am Client.
...
bye
BUILD SUCCESSFUL (total time: 22 seconds)
```

udpBaseServer_2.java | udpBaseClient_2.java

Source | History

```java
/**
 *
 * @Aditi Tarak
 */
import java.io.IOException;
import java.net.DatagramPacket;
import java.net.DatagramSocket;
import java.net.InetAddress;
import java.net.SocketException;

public class udpBaseServer_2 {
        public static void main(String[] args) throws IOException {
                DatagramSocket ds = new DatagramSocket(1234);
                byte[] receive = new byte[65535];
                DatagramPacket DpReceive = null;
                while (true) {
                        DpReceive = new DatagramPacket(receive, receive.length);

                        ds.receive(DpReceive);
                        System.out.println("Client:-" + data(receive));
                        if (data(receive).toString().equals("bye")) {
                                System.out.println("Client sent bye.....EXITING");
                                break;
                        }
                        receive = new byte[65535];
                }
        }
        public static StringBuilder data(byte[] a){
                if (a == null)
                        return null;
                StringBuilder ret = new StringBuilder();
                int i = 0;
                while (a[i] != 0) {
                        ret.append((char) a[i]);
                        i++;
                }
                return ret;
        }
```

Output

Socket (run) #13 | Socket (run) #14

```
run:
Hello
I am Client.
...
bye
BUILD SUCCESSFUL (total time: 22 seconds)
```

2. Write a program to demonstrate status of key on applet window such as keyPressed, keyReleased, keyUp, keyDown.

Source Code:

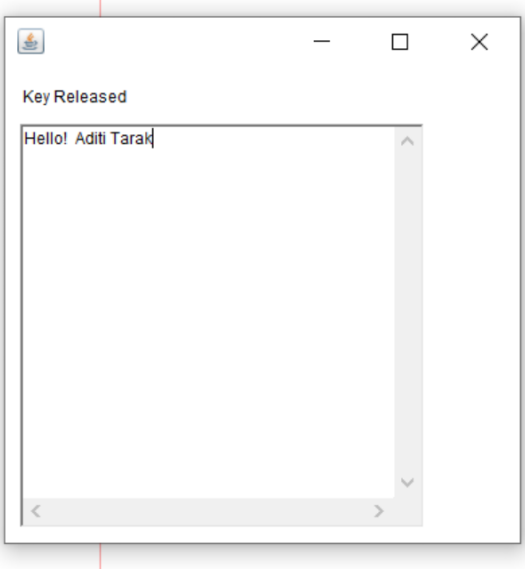
```
import java.awt.*;
import java.awt.event.*;
public class KeyListenerExample extends Frame
implements KeyListener{
Label l;
TextArea area;
KeyListenerExample(){
 l=new Label();
 l.setBounds(20,50,100,20);
 area=new TextArea();
 area.setBounds(20,80,300, 300);
 area.addKeyListener(this);
 add(l);add(area);
 setSize(400,400);
 setLayout(null);
 setVisible(true);
  }
public void keyPressed(KeyEvent e) {
 l.setText("Key Pressed");
 }
```

```
public void keyReleased(KeyEvent e) {
 l.setText("Key Released");
 }
public void keyTyped(KeyEvent e) {
l.setText("Key Typed");  }
 public void keyUp(KeyEvent e) {
 l.setText("Key Up");  }
public void keyDown(KeyEvent e) {
 l.setText("Key Down"); }
 public static void main(String[] args) {
 new KeyListenerExample();
} }
```

KeyListenerExample.java

Source | History

```
1  /*
2   * @Aditi Tarak
3   */
4
5  import java.awt.*;
6  import java.awt.event.*;
7  public class KeyListenerExample extends Frame implements KeyListener{
8      Label l;
9      TextArea area;
10     KeyListenerExample(){
11
12         l=new Label();
13         l.setBounds(20,50,100,20);
14         area=new TextArea();
15         area.setBounds(20,80,300, 300);
16         area.addKeyListener(this);
17
18         add(l);add(area);
19         setSize(400,400);
20         setLayout(null);
21         setVisible(true);
22     }
23 public void keyPressed(KeyEvent e) {
24         l.setText("Key Pressed");
25     }
27     public void keyReleased(KeyEvent e) {
28         l.setText("Key Released");
29     }
30     public void keyTyped(KeyEvent e) {
31         l.setText("Key Typed");
32     }
33     public void keyUp(KeyEvent e) {
34         l.setText("Key Up");
35     }
36     public void keyDown(KeyEvent e) {
37         l.setText("Key Down");
38     }
40     public static void main(String[] args) {
41         new KeyListenerExample();
    }
}
```



3. Write a java program to create a file with your name, save it in the desktop, write some data on the file and then read and print that data into the console.

Source Code:

```
import java.io.FileReader;

public class FileReaderAditi {

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

FileReader fr = new FileReader("C:\\Users\\ASUS\
\OneDrive\\Desktop\\aditi.txt");

        int i;
        while((i=fr.read())!=-1)
        System.out.print((char)i);
        fr.close();
    }

}
```

FileReaderAditi.java

Source | History

```java
/**
 *
 * @Aditi Tarak
 */
import java.io.FileReader;
public class FileReaderAditi {

    public static void main(String args[])throws Exception{
          FileReader fr = new FileReader("C:\\Users\\ASUS\\OneDrive\\Desktop\\aditi.txt");
          int i;
          while((i=fr.read())!=-1)
          System.out.print((char)i);
          fr.close();
    }
}
```

Output - Java_Project (run)

```
run:
Hello World !
This is a java ProgrammingBUILD SUCCESSFUL (total time: 0 seconds)
```