JAVA EXPERIMENT NO 6

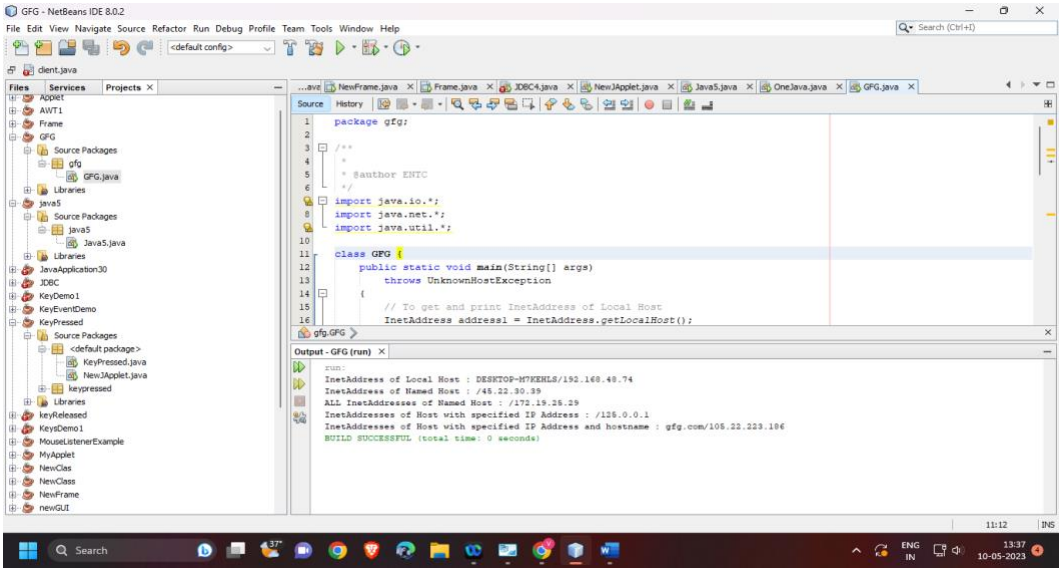
a) InetAddress – Factory Methods :

CODE

```
package gfg;

import java.io.*;
import java.net.*;
import java.util.*;

class GFG {
   public static void main(String[] args)
      throws UnknownHostException
   {
      InetAddress address1 = InetAddress.getLocalHost();
      System.out.println("InetAddress of Local Host : + address1);



      InetAddress address2
         = InetAddress.getByName("45.22.30.39");
      System.out.println("InetAddress of Named Host : "+ address2);

      InetAddress address3[]
         = InetAddress.getAllByName("172.19.25.29");
      for (int i = 0; i < address3.length; i++) {
         System.out.println(
            "ALL InetAddresses of Named Host : "+ address3[i]);
      }
      byte IPAddress[] = { 125, 0, 0, 1 };
      InetAddress address4
```

```
        = InetAddress.getByAddress(IPAddress);
        System.out.println(
            "InetAddresses of Host with specified IP Address : "
            + address4);

        // To get and print InetAddresses of Host
        // with specified IP Address and hostname
        byte[] IPAddress2
            = { 105, 22, (byte)223, (byte)186 };
        InetAddress address5 = InetAddress.getByAddress(
            "gfg.com", IPAddress2);
        System.out.println(
            "InetAddresses of Host with specified IP Address and hostname : "
            + address5);
    }
}
```

OUTPUT:



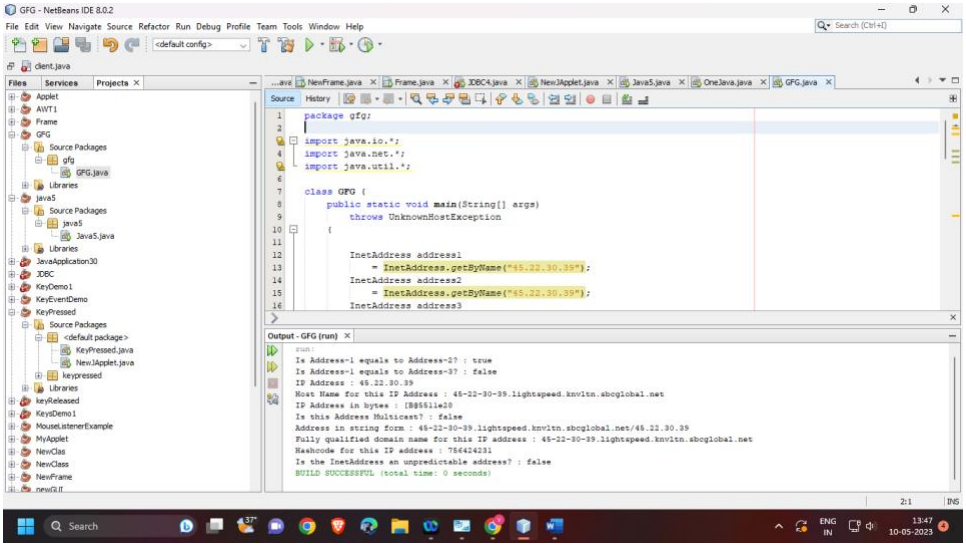
b) InetAddress — Instance Methods :

CODE:

```
package gfg;
 import java.io.*;
import java.net.*;
import java.util.*;

class GFG {
   public static void main(String[] args)
       throws UnknownHostException
   {

       InetAddress address1  = InetAddress.getByName("45.22.30.39");
       InetAddress address2 = InetAddress.getByName("45.22.30.39");
       InetAddress address3= InetAddress.getByName("172.19.25.29");
      // true, as clearly seen above
       System.out.println(
           "Is Address-1 equals to Address-2? : "
           + address1.equals(address2));
       // false
       System.out.println(
           "Is Address-1 equals to Address-3? : "
           + address1.equals(address3));

       // returns IP address
       System.out.println("IP Address : "+ address1.getHostAddress());
       // returns host name,
       // which is same as IP
       // address in this case
```

```
        System.out.println(
           "Host Name for this IP Address : "
           + address1.getHostName());

        // returns address in bytes
        System.out.println("IP Address in bytes : "
                        + address1.getAddress());

        // false, as the given site
        //  has only one server
        System.out.println("Is this Address Multicast? : "
                        + address1.isMulticastAddress());

        System.out.println("Address in string form : "
                        + address1.toString());

        // returns fully qualified
        // domain name for this IP address.
        System.out.println(
           "Fully qualified domain name for this IP address : "
           + address1.getCanonicalHostName());

       System.out.println("Hashcode for this IP address : "
                        + address1.hashCode());

            System.out.println("Is the InetAddress an unpredictable address? : "
+ address1.isAnyLocalAddress());
    }
}
```

OUTPUT:


GFG - NetBeans IDE 8.0.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
client.java
Files Services Projects
Applet
AWT1
Frame
GFG
Source Packages
gfg
GFG.java
Libraries
Java5
Source Packages
java5
Java5.java
Libraries
JavaApplication30
JDBC
KeyDemo1
KeyEventDemo
KeyPressed
Source Packages
<default package>
KeyPressed.java
NewJApplet.java
keypressed
Libraries
keyReleased
KeysDemo1
MouseListenerExample
MyApplet
NewClas
NewClass
NewFrame
newGUI
NewFrame.java
Frame.java
JDBC4.java
NewJApplet.java
Java5.java
OneJava.java
GFG.java
Source History
package gfg;
import java.io.*;
import java.net.*;
import java.util.*;
class GFG {
public static void main(String[] args)
throws UnknownHostException
{
InetAddress address1
= InetAddress.getByName("45.22.30.39");
InetAddress address2
= InetAddress.getByName("45.22.30.39");
InetAddress address3
Output - GFG (run)
run:
Is Address-1 equals to Address-2? : true
Is Address-1 equals to Address-3? : false
IP Address : 45.22.30.39
Host Name for this IP Address : 45-22-30-39.lightspeed.knvltn.sbcglobal.net
IP Address in bytes : [B@551e20
Is this Address Multicast? : false
Address in string form : 45-22-30-39.lightspeed.knvltn.sbcglobal.net/45.22.30.39
Fully qualified domain name for this IP address : 45-22-30-39.lightspeed.knvltn.sbcglobal.net
Hashcode for this IP address : 756424231
Is the InetAddress an unpredictable address? : false
BUILD SUCCESSFUL (total time: 0 seconds)
2:1
INS
Search
ENG
IN
13:47
10-05-2023