JAVA PROGRAMMING DAY 5 Assignments

192225114

A.Aishwarya

1. Program to demonstrate garbage collection in java

PROGRAM

```java
public class Day5Assignment1{
 public void finalize(){
    System.out.println(x:"Garbage collected");
 }
 public static void main(String args[]){
  Day5Assignment1 obj=new Day5Assignment1();
  obj=null;
  System.gc();
 }
}
```

Output

```
PS O:\studies_bitch\java_bruh\java programs\day 5> java Day5Assignment1
Garbage collected
PS O:\studies_bitch\java_bruh\java programs\day 5>
```

2.program to shutdown a pc in java and opening application like notepad

Program

```java
import java.io.*;
public class Day5Assignment2
{
    Run | Debug
    public static void main(String[] args)
    {
        Runtime runtime = Runtime.getRuntime();
        try
        {
            System.out.println("Shutting down the PC after 5 seconds.");
            runtime.exec("shutdown -s -t 5");
        }
        catch(IOException e)
        {
            System.out.println("Exception: " +e);
        }
    }
}
```

3.Java program to send message between client and server using tcp protocol

CLIENT SIDE

```java
import java.io.*;
import java.net.*;
public class Day5Assignment3clientside {
    private Socket socket = null;
    private DataInputStream input = null;
    private DataOutputStream out = null;
    public Client(String address, int port)
    {
        try {
            socket = new Socket(address, port);
            System.out.println("Connected");
            input = new DataInputStream(System.in);
            out = new DataOutputStream(
                socket.getOutputStream());
        }
        catch (UnknownHostException u) {
            System.out.println(u);
            return;
        }
        catch (IOException i) {
            System.out.println(i);
            return;
        }
        String line = "";
        while (!line.equals("Over")) {
            try {
                line = input.readLine();
                out.writeUTF(line);
            }
            catch (IOException i) {
```

```java
                System.out.println(i);
            }
        }
        try {
            input.close();
            out.close();
            socket.close();
        }
        catch (IOException i) {
            System.out.println(i);
        }
    }

    public static void main(String args[])
    {
        Client client = new Client("127.0.0.1", 5000);
    }
}
```

Server side

```java
import java.net.*;
import java.io.*;
public class Day5Assignment3serverside
{
    private Socket      socket = null;
    private ServerSocket server = null;
    private DataInputStream in   = null;
    public Server(int port)
    {
        try
        {
            server = new ServerSocket(port);
            System.out.println("Server started");
            System.out.println("Waiting for a client ...");
            socket = server.accept();
            System.out.println("Client accepted");
            in = new DataInputStream(
                new BufferedInputStream(socket.getInputStream()));
            String line = "";
            while (!line.equals("Over"))
            {
```

```java
            try
            {
                line = in.readUTF();
                System.out.println(line);

            }
            catch(IOException i)
            {
                System.out.println(i);
            }
        }
        System.out.println("Closing connection");
        socket.close();
        in.close();
    }
    catch(IOException i)
    {
        System.out.println(i);
    }
}
public static void main(String args[])
{
    Server server = new Server(5000);
}
}
```

4.Java program to execute ping command

Program

```java
import java.io.*;
import java.net.*;
class Day5Assignment4
{
 public static void sendPingRequest(String ipAddress)
        throws UnknownHostException, IOException
 {
  InetAddress opher = InetAddress.getByName(ipAddress);
  System.out.println("Sending Ping Request to " + ipAddress);
  if (opher.isReachable(5000))
    System.out.println("Host is reachable");
  else
    System.out.println("Sorry ! We can't reach to this host");
 }
 public static void main(String[] args)
      throws UnknownHostException, IOException
 {
  String ipAddress = "127.0.0.1";
  sendPingRequest(ipAddress);
 }
}
```

Output

```
Sending Ping Request to 127.0.0.1
Host is reachable
```

5.Java program to find ip address

```java
import java.net.*;
public class Main extends InetAddress{
    public static void main(String[] args) throws UnknownHostException {
        try {
            InetAddress localHost = InetAddress.getLocalHost();
        System.out.println(localHost.getHostAddress());

        } catch (UnknownHostException e) {
            System.out.println("hello");
        }


    }
}
```

Output

172.17.0.2