CSE3011 NETWORK PROGRAMMING

LAB EXPERIMENT 3

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LAB SLOT – L43+L44

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Experiment Description: Remote Method Invocation (RMI)

Codes:

RMIServInt.java (Server Interface Class)

```
import java.rmi.*;
import java.rmi.server.*;
public interface RMIServInt extends Remote{
 public double sum(double n1, double n2) throws RemoteException;
}
```

RMIServImpl.java (Server Implementation Class)

```
import java.rmi.*;
import java.rmi.server.*;
public class RMIServImpl extends UnicastRemoteObject implements
RMIServInt{
  public RMIServImpl() throws RemoteException
  {
```

```
    super();
  }
  public double sum(double n1, double n2) throws RemoteException{
    return n1+n2;
  }
}
```

RMIServer.java (Server Class)

```
import java.rmi.*;
import java.rmi.server.*;
import java.rmi.registry.*;
public class RMIServer extends RMIServImpl{
    public RMIServer() throws RemoteException
    {

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

    try
    {
      Registry registry= LocateRegistry.createRegistry(5000);
      RMIServImpl serv = new RMIServImpl();
      registry.rebind("rmiServer",serv);
      System.out.println("SERVER operation completed!");
```

```
    }
    catch(Exception e)
    {
      System.out.println(e);
    }

  }
}
```

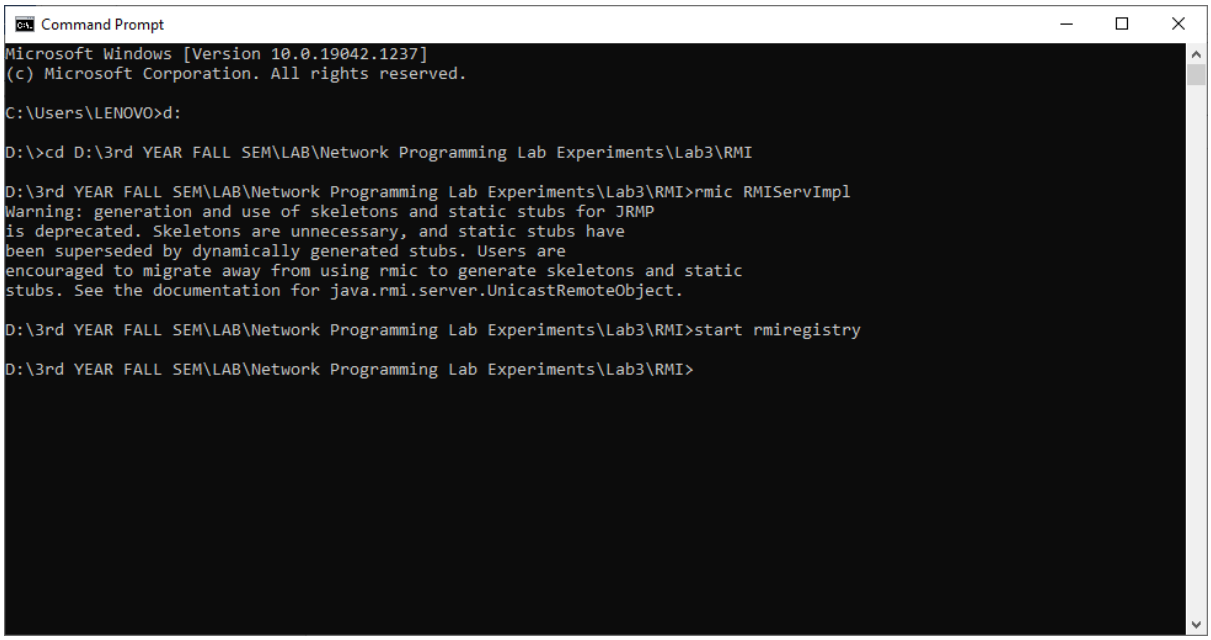
RMIClient.java (Client class)

```
import java.rmi.server.*;
import java.rmi.registry.*;

public class RMIClient{
   public static void main(String[]args) throws RemoteException{
     try
     {
        double n1 = Double.parseDouble(args[0]);
        double n2 = Double.parseDouble(args[1]);
        Registry registry = LocateRegistry.getRegistry("127.0.0.1",5000);
        RMIServInt a = (RMIServInt)registry.lookup("rmiServer");
        System.out.println("First number value: "+n1);
        System.out.println("Second number value: "+n2);
        System.out.println("Sum of the two numbers:\t"+a.sum(n1,n2));
     }
```

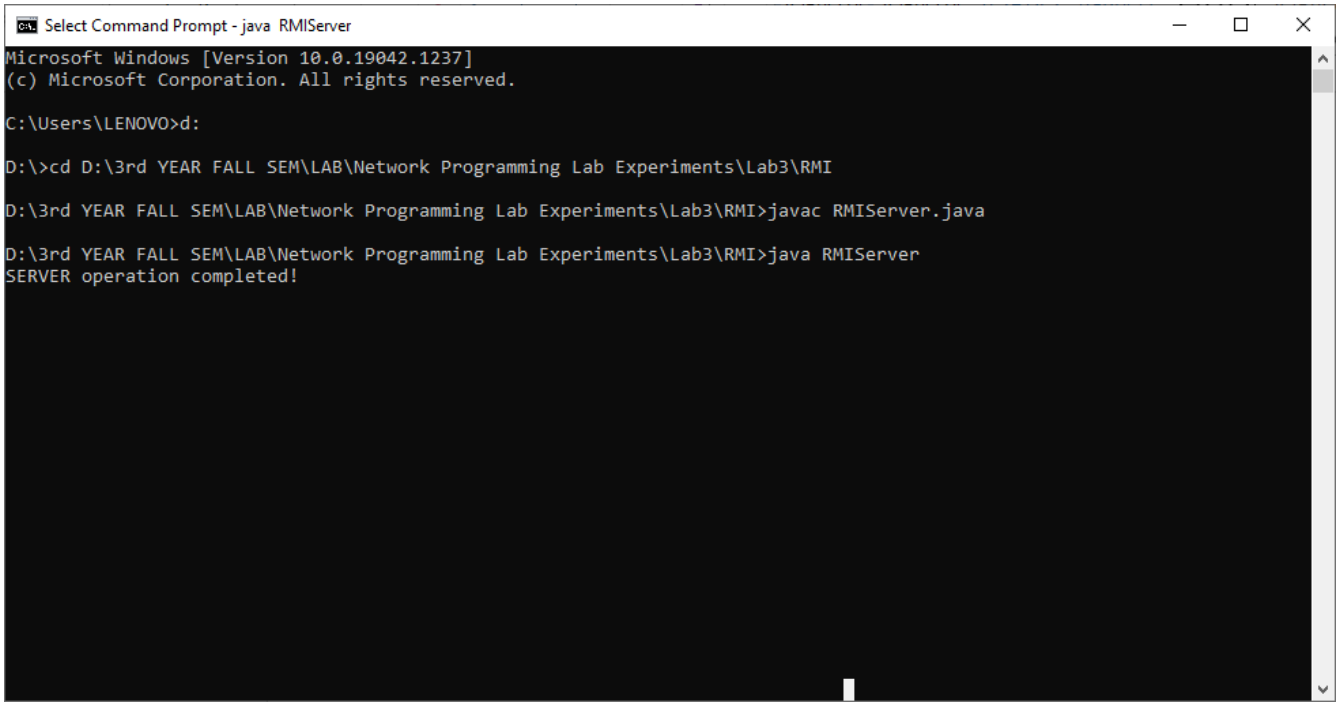
```
    catch(Exception e)
    {
      System.out.println(e);
    }

  }

}
```

Output:

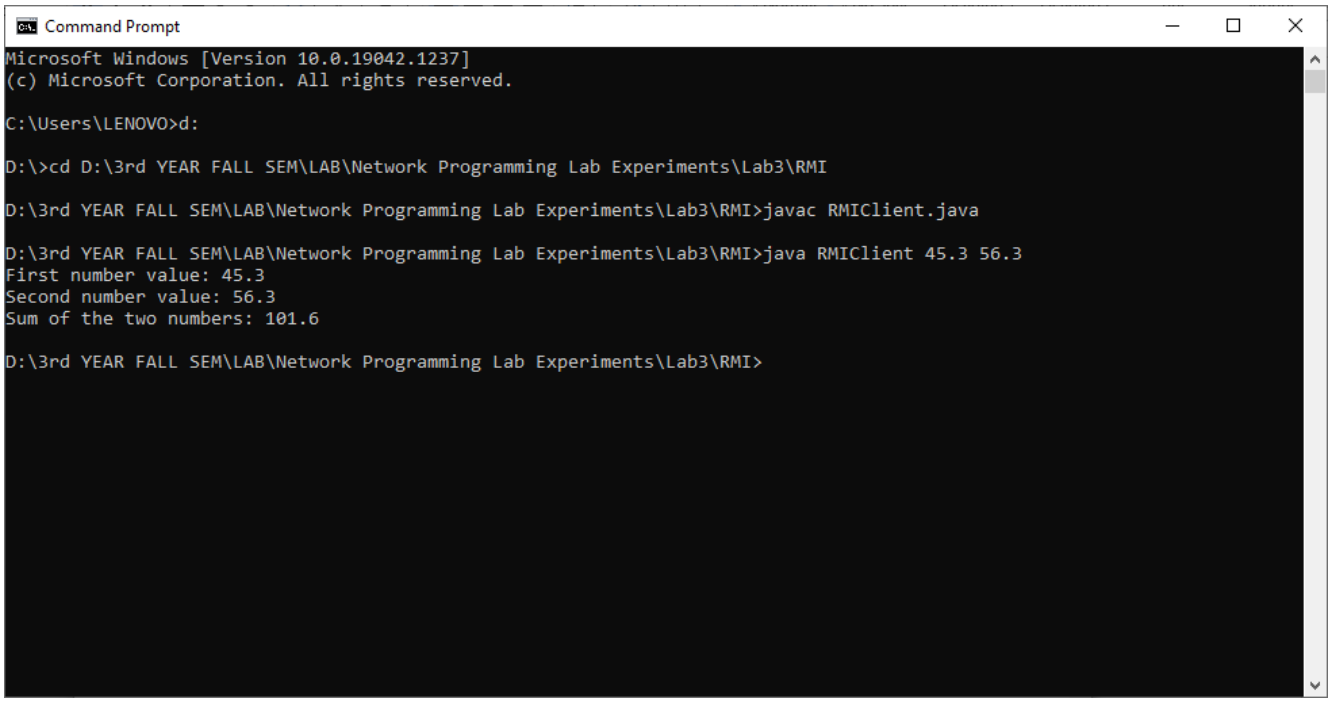
1) **Generating stub using rmic command on server implementation class**
2) **Then starting the rmi registry using start rmiregistry command**



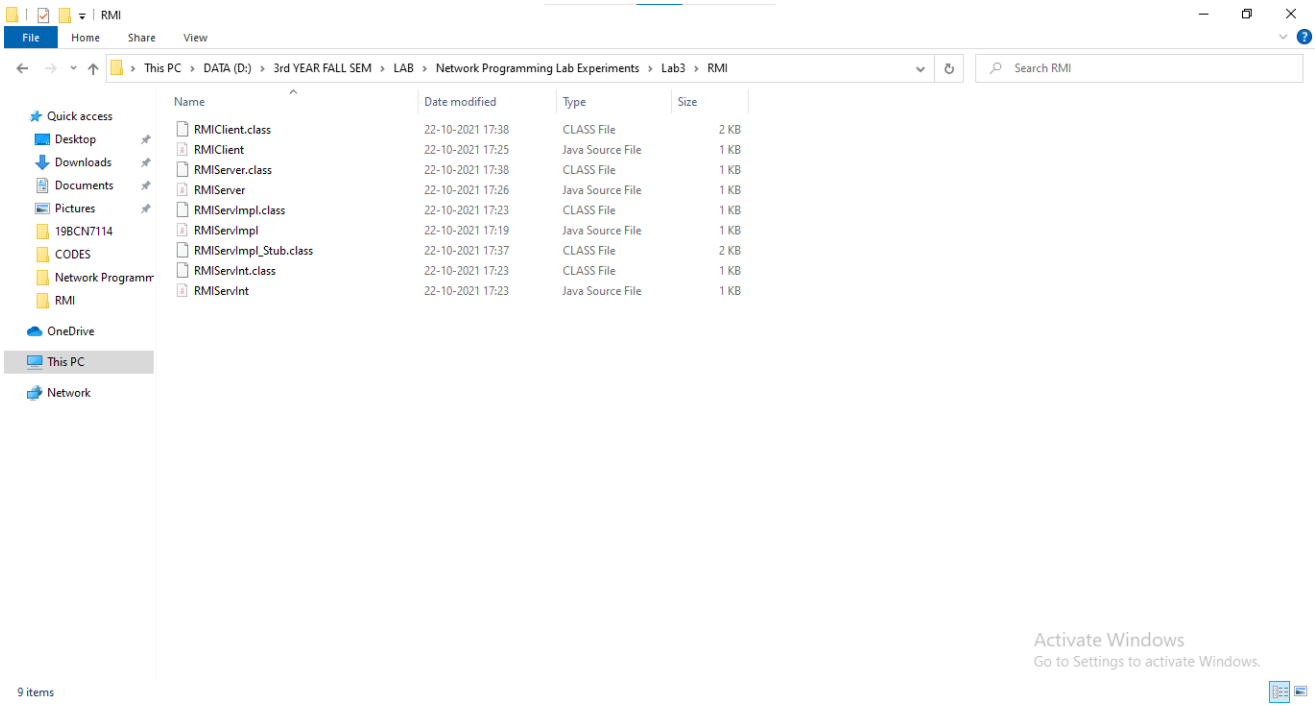
3) Compile and execute the server class in another command prompt



4) Then compile and execute the Client class in another command prompt



5) Stub class is present in folder or not.



RMIServImpl_Stub.class is the stub class.