DPA – Lab 3

import *java.rmi.Remote*;

import *java.rmi.RemoteException*;

*public* *interface* Calculator *extends* Remote {

   long sub(long var1, long var3) *throws* RemoteException;

}

*public* *interface* Calculator *extends* java.rmi.Remote {

*public* long add(long a, long b) *throws* java.rmi.RemoteException;

*public* long sub(long a, long b) *throws* java.rmi.RemoteException;

*public* long multiply(long a, long b) *throws* java.rmi.RemoteException;

*public* double divide(long a, long b) *throws* java.rmi.RemoteException;

}

import *java.net.MalformedURLException*;

import *java.rmi.Naming*;

import *java.rmi.NotBoundException*;

import *java.rmi.RemoteException*;

*public* *class* CalculatorClient {

*public* CalculatorClient() {

   }

*public* *static* void main(String[] var0) {

      try {

         Calculator var1 = (Calculator)Naming.lookup("rmi://localhost/CalculatorService");

         System.out.println(var1.sub(4L, 3L));

      } catch (MalformedURLException var2) {

         System.out.println();

         System.out.println("MalformedURLException");

         System.out.println(var2);

      } catch (RemoteException var3) {

         System.out.println();

         System.out.println("RemoteException");

         System.out.println(var3);

      } catch (NotBoundException var4) {

         System.out.println();

         System.out.println("NotBoundException");

         System.out.println(var4);

      } catch (ArithmeticException var5) {

         System.out.println();

         System.out.println("java.lang.ArithmeticException");

         System.out.println(var5);

      }

   }

}

import *java.rmi.Naming*;

import *java.rmi.RemoteException*;

import *java.net.MalformedURLException*;

import *java.rmi.NotBoundException*;

*public* *class* CalculatorClient {

*public* *static* void main(String[] args) {

        try {

            Calculator c = (Calculator) Naming.lookup(

                    "rmi://localhost/CalculatorService");

            System.out.println("Addition: " + c.add(4, 3));

            System.out.println("Subtraction: " + c.sub(4, 3));

            System.out.println("Multiplication: " + c.multiply(4, 3));

            System.out.println("Division: " + c.divide(4, 3));

            try {

                System.out.println("Division by zero: " + c.divide(4, 0));

            } catch (RemoteException re) {

                System.out.println("Division by zero caught: " + re.getMessage());

            }

        }

        catch (MalformedURLException murle) {

            System.out.println();

            System.out.println("MalformedURLException");

            System.out.println(murle);

        }

        catch (RemoteException re) {

            System.out.println();

            System.out.println("RemoteException");

            System.out.println(re);

        }

        catch (NotBoundException nbe) {

            System.out.println();

            System.out.println("NotBoundException");

            System.out.println(nbe);

        }

        catch (java.lang.ArithmeticException ae) {

            System.out.println();

            System.out.println("java.lang.ArithmeticException");

            System.out.println(ae);

        }

    }

}

import *java.rmi.RemoteException*;

import *java.rmi.server.UnicastRemoteObject*;

*public* *class* CalculatorImpl *extends* UnicastRemoteObject *implements* Calculator {

*public* CalculatorImpl() *throws* RemoteException {

   }

*public* long sub(long var1, long var3) *throws* RemoteException {

      return var1 - var3;

   }

}

*public* *class* CalculatorImpl *extends* java.rmi.server.UnicastRemoteObject *implements* Calculator {

*public* CalculatorImpl() *throws* java.rmi.RemoteException {

        super();

    }

*public* long add(long a, long b) *throws* java.rmi.RemoteException {

        return a + b;

    }

*public* long sub(long a, long b) *throws* java.rmi.RemoteException {

        return a - b;

    }

*public* long multiply(long a, long b) *throws* java.rmi.RemoteException {

        return a \* b;

    }

*public* double divide(long a, long b) *throws* java.rmi.RemoteException {

        if (b == 0) {

            throw new java.rmi.RemoteException("Division by zero");

        }

        return (double) a / b;

    }

}

import *java.rmi.Naming*;

*public* *class* CalculatorServer {

*public* CalculatorServer() {

      try {

         CalculatorImpl var1 = new CalculatorImpl();

         Naming.rebind("rmi://localhost:1099/CalculatorService", var1);

      } catch (Exception var2) {

         System.out.println("Trouble: " + String.valueOf(var2));

      }

   }

*public* *static* void main(String[] var0) {

      new CalculatorServer();

   }

}

import *java.rmi.Naming*;

*public* *class* CalculatorServer {

*public* CalculatorServer() {

        try {

            Calculator c = new CalculatorImpl();

            Naming.rebind("rmi://localhost:1100/CalculatorService", c);

            System.out.println("Calculator Server is ready.");

        } catch (Exception e) {

            System.out.println("Trouble: " + e);

        }

    }

*public* *static* void main(String args[]) {

        new CalculatorServer();

    }

}