

Q. RMI api code.

CalculatorIntf.java

```
import java.rmi.*;
public interface CalculatorIntf extends Remote{
    public int add(int num1,int num2)throws RemoteException;
    public int sub(int num1,int num2)throws RemoteException;
    public int mul(int num1,int num2)throws RemoteException;
    public int div(int num1,int num2)throws RemoteException;
}
```

Calculator.java

```
import java.rmi.*;
import java.rmi.server.*;
public class Calculator extends UnicastRemoteObject implements CalculatorIntf{

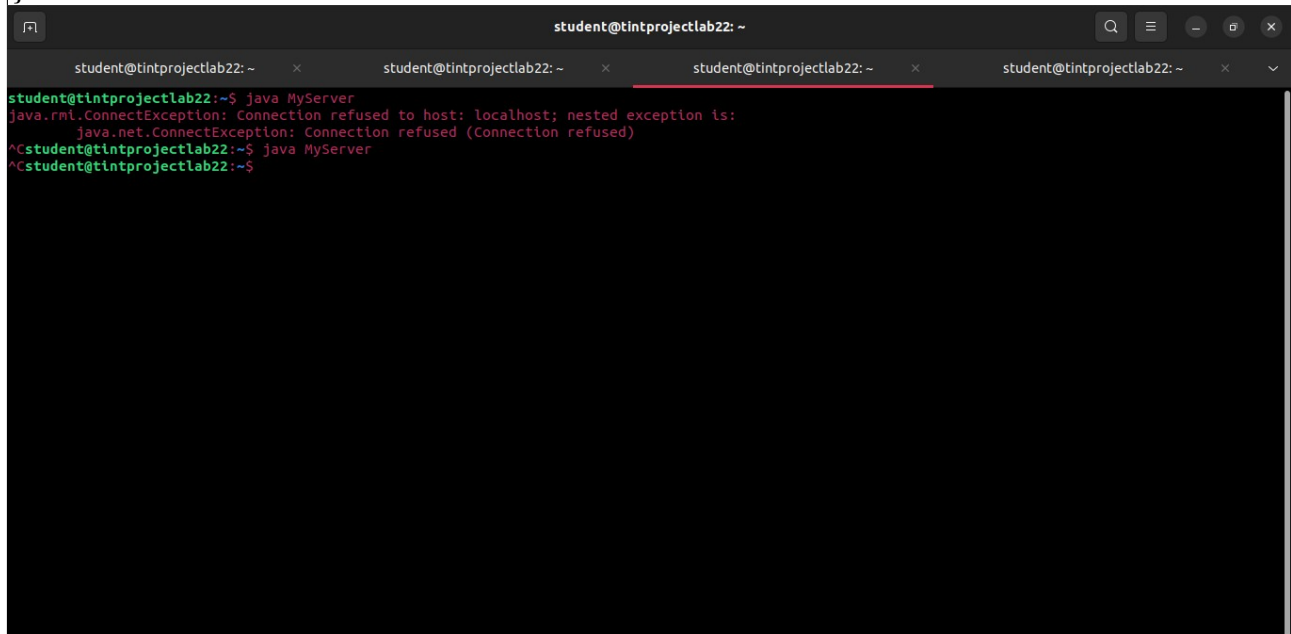
    public Calculator() throws RemoteException{
    }
    public int add(int num1, int num2){
        return num1 + num2;
    }
    public int sub(int num1, int num2){
        return num1 - num2;
    }
    public int mul(int num1, int num2){
        return num1 * num2;
    }
    public int div(int num1, int num2){
        return num1 / num2;
    }
}
```

MyServer.java

```
import java.rmi.*;
import java.rmi.registry.*;
public class MyServer{
    public static void main(String args[]){
        try{
            CalculatorIntf stub = new Calculator();
            Naming.rebind("rmi://localhost:5000/cal", stub);
        } catch(Exception e){
            System.out.println(e);
        }
    }
}
```

MyClient.java

```
import java.rmi.*;
public class MyClient{
    public static void main(String args[]){
        try{
            CalculatorIntf stub = (CalculatorIntf) Naming.lookup("rmi://localhost:5000/cal");
            System.out.println(stub.add(34,4));
        } catch(Exception e){}
    }
}
```

A screenshot of a terminal window with a dark background. The window title is "student@tintprojectlab22: ~". There are four tabs at the top, all with the same title. The terminal shows the command "java MyServer" being executed. The output is a red error message: "java.rmi.ConnectException: Connection refused to host: localhost; nested exception is: java.net.ConnectException: Connection refused (Connection refused)". The prompt "student@tintprojectlab22:~\$" is visible at the end of the line.

```
student@tintprojectlab22: ~
student@tintprojectlab22:~$ java MyServer
java.rmi.ConnectException: Connection refused to host: localhost; nested exception is:
    java.net.ConnectException: Connection refused (Connection refused)
^Cstudent@tintprojectlab22:~$ java MyServer
^Cstudent@tintprojectlab22:~$
```

```
student@tintprojectlab22: ~  
student@tintprojectlab22: ~$ #rmic Calculator  
student@tintprojectlab22: ~$ #rmiregistry 5000  
student@tintprojectlab22: ~$ javac CalculatorIntf.java  
^[[A^[[Astudent@tintprojectlab22: ~$ javac Calculator.java  
student@tintprojectlab22: ~$ javac MyServer.java  
student@tintprojectlab22: ~$ javac MyClient.java  
student@tintprojectlab22: ~$ rmic Calculator  
Warning: generation and use of skeletons and static stubs for JRMP  
is deprecated. Skeletons are unnecessary, and static stubs have  
been superseded by dynamically generated stubs. Users are  
encouraged to migrate away from using rmic to generate skeletons and static  
stubs. See the documentation for java.rmi.server.UnicastRemoteObject.  
student@tintprojectlab22: ~$ rmiregistry 5000
```

```
student@tintprojectlab22: ~  
student@tintprojectlab22: ~$ java MyClient  
38  
student@tintprojectlab22: ~$ java MyClient  
student@tintprojectlab22: ~$ java MyClient  
38  
student@tintprojectlab22: ~$ █
```