

## Client

```
// RARPCClient.java
import java.util.Scanner;

public class RARPCClient {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter IP Address to resolve: ");
        String ipAddress = scanner.nextLine();

        // Simulate sending a request to the server for RARP resolution
        RARPServer server = new RARPServer();
        String resolvedMAC = server.resolveMACAddress(ipAddress);

        if (resolvedMAC != null) {
            System.out.println("Resolved MAC Address: " + resolvedMAC);
        } else {
            System.out.println("MAC Address not found for IP " + ipAddress);
        }

        scanner.close();
    }
}
```

## Server

```
// RARPServer.java
import java.util.HashMap;
import java.util.Map;

public class RARPServer {
    private Map<String, String> addressTable;

    public RARPServer() {
        addressTable = new HashMap<>();
        // Initialize the address table with some sample values
        addressTable.put("00:11:22:33:44:55", "192.168.1.1");
        addressTable.put("66:77:88:99:aa:bb", "192.168.1.2");
    }
}
```

```

    }

    public String resolveMACAddress(String ipAddress) {
        // Simulate RARP resolution
        for (Map.Entry<String, String> entry : addressTable.entrySet()) {
            if (entry.getValue().equals(ipAddress)) {
                return entry.getKey();
            }
        }
        return null; // MAC address not found for the given IP
    }

    public static void main(String[] args) {
        RARPServer server = new RARPServer();
        String ipAddress = "192.168.1.1";
        String resolvedMAC = server.resolveMACAddress(ipAddress);

        if (resolvedMAC != null) {
            System.out.println("MAC Address for IP " + ipAddress + ": " + resolvedMAC);
        } else {
            System.out.println("MAC Address not found for IP " + ipAddress);
        }
    }
}

```

### **Server O/P**

MAC Address for IP 192.168.1.1: 00:11:22:33:44:55

### **Client O/P**

Enter IP Address to resolve: 192.168.1.1  
 Resolved MAC Address: 00:11:22:33:44:55