



**NAME :: IBRAR BABAR**

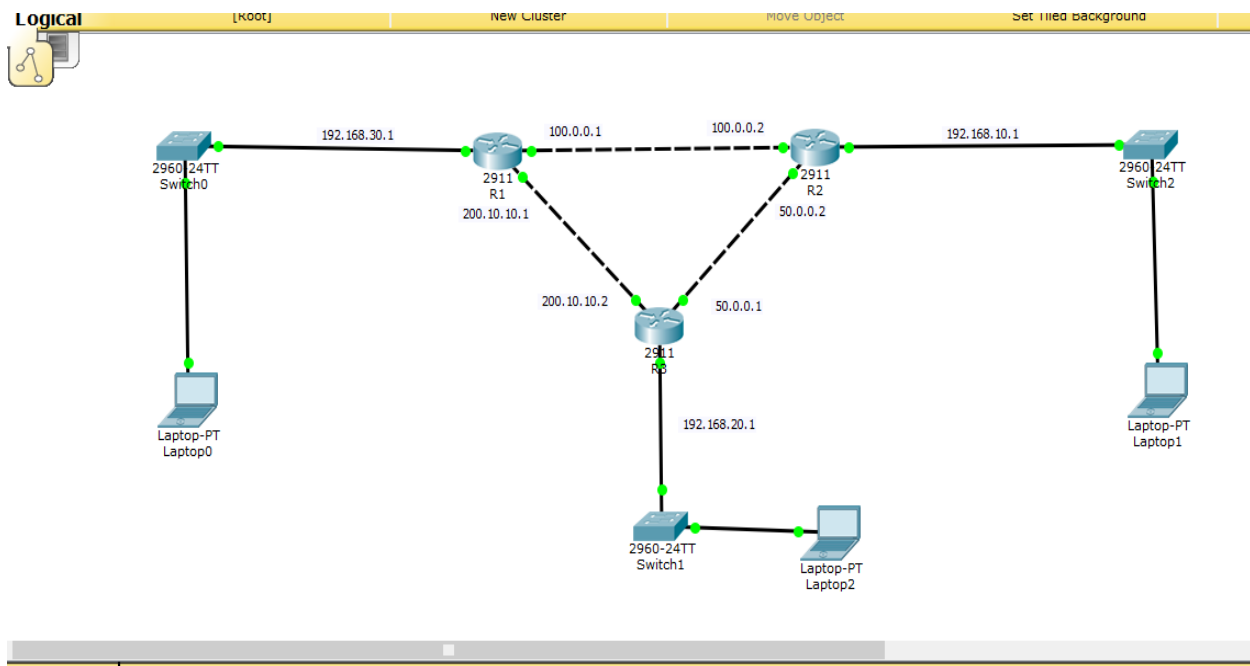
**ROLL NO. :: 19P-0104**

**CN LAB HOME WORK :: 10**

**SECTION (B)**

**Q).** Answer how much network are there. ?

**Ans:** There are total **6 networks** in the topology.



R1

Physical Config CLI

## IOS Command Line Interface

```
Router>
Router>en
Router#conf ter
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname R1
R1(config)#int g0/2
R1(config-if)#ip add 192.168.30.1
% Incomplete command.
R1(config-if)#ip add 192.168.30.1 255.255.255.0
R1(config-if)#no shut

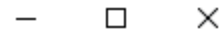
R1(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/2, changed state
to up

R1(config-if)#ex
R1(config)#ip dhcp pool p1
R1(dhcp-config)#network 192.168.2.1 255.255.255.0
R1(dhcp-config)#default-router 192.168.2.1
R1(dhcp-config)#ex
R1(config)#ip dhcp excluded-address 192.168.2.1
R1(config)#int g0/0
R1(config-if)#ip address 100.0.0.1 255.0
^
% Invalid input detected at '^' marker.

R1(config-if)#ip address 100.0.0.1 255.0.0.0
R1(config-if)#
```

R1



Physical Config CLI

## IOS Command Line Interface

Press RETURN to get started.

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up

R1>

R1>en

R1#conf ter

Enter configuration commands, one per line. End with CNTL/Z.

R1(config)#int g0/1

R1(config-if)#ip address 200.10.10.1 255.255.255.0

R1(config-if)#no shut

R1(config-if)#

%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up

R1(config-if)#

## IOS Command Line Interface

```
R2>en
R2#conf ter
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#int g0/2
R2(config-if)#ip address 192.168.10.1 255.255.255.0
R2(config-if)#no shut
R2(config-if)#ip dhcp pool p2
R2(dhcp-config)#network 192.168.10.1 255.255.255.0
R2(dhcp-config)#default-router 192.168.10.1
R2(dhcp-config)#ex
R2(config)#ip dhcp excluded-address 192.168.10.1
R2(config)#ex
R2#
%SYS-5-CONFIG_I: Configured from console by console

R2#conf ter
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#int g0/0
R2(config-if)#ip address 100.0.0.2 255.0.0.0
R2(config-if)#no shut

R2(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state
to up

R2(config-if)#
```



Physical	Config	CLI
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## IOS Command Line Interface

```
R2(config-if)#no shut
R2(config-if)#
R2(config-if)#
R2(config-if)#
R2(config-if)#
R2(config-if)#
R2(config-if)#
R2(config-if)#
R2(config-if)#
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R2(config-if)#
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R2(config-if)#
R2(config-if)#
R2(config-if)#
R2(config-if)#
R2(config-if)#
R2(config-if)#
R2(config-if)#
R2(config-if)#ex
R2(config)#int g0/1
R2(config-if)#ip address 50.0.0.2 255.0.0.0
R2(config-if)#no shut
R2(config-if)#
```

Copy

Paste



Physical Config CLI

## IOS Command Line Interface

```
Router>en
Router#conf ter
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname R3
R3(config)#int g0/2
R3(config-if)#ip add 192.168.20.1 255.255.255.0
R3(config-if)#no shut

R3(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/2, changed state
to up

R3(config-if)#ex
R3(config)#ip dhcp pool P3
R3(dhcp-config)#network 192.168.20.1 255.255.255.0
R3(dhcp-config)#default-router 192.168.20.1
R3(dhcp-config)#ex
R3(config)#ip dhcp excluded-address 192.168.20.1
R3(config)#int g0/1
R3(config-if)#ip address 50.0.0.1 255.0.0.0
R3(config-if)#ni shut
^
% Invalid input detected at '^' marker.

R3(config-if)#no shut
R3(config-if)#
```

Copy

Paste



Physical Config CLI

## IOS Command Line Interface

```
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#int g0/0
R3(config-if)#ip address 200.10.10.2 255.255.255.0
R3(config-if)#no shut

R3(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state
to up

R3(config-if)#
```

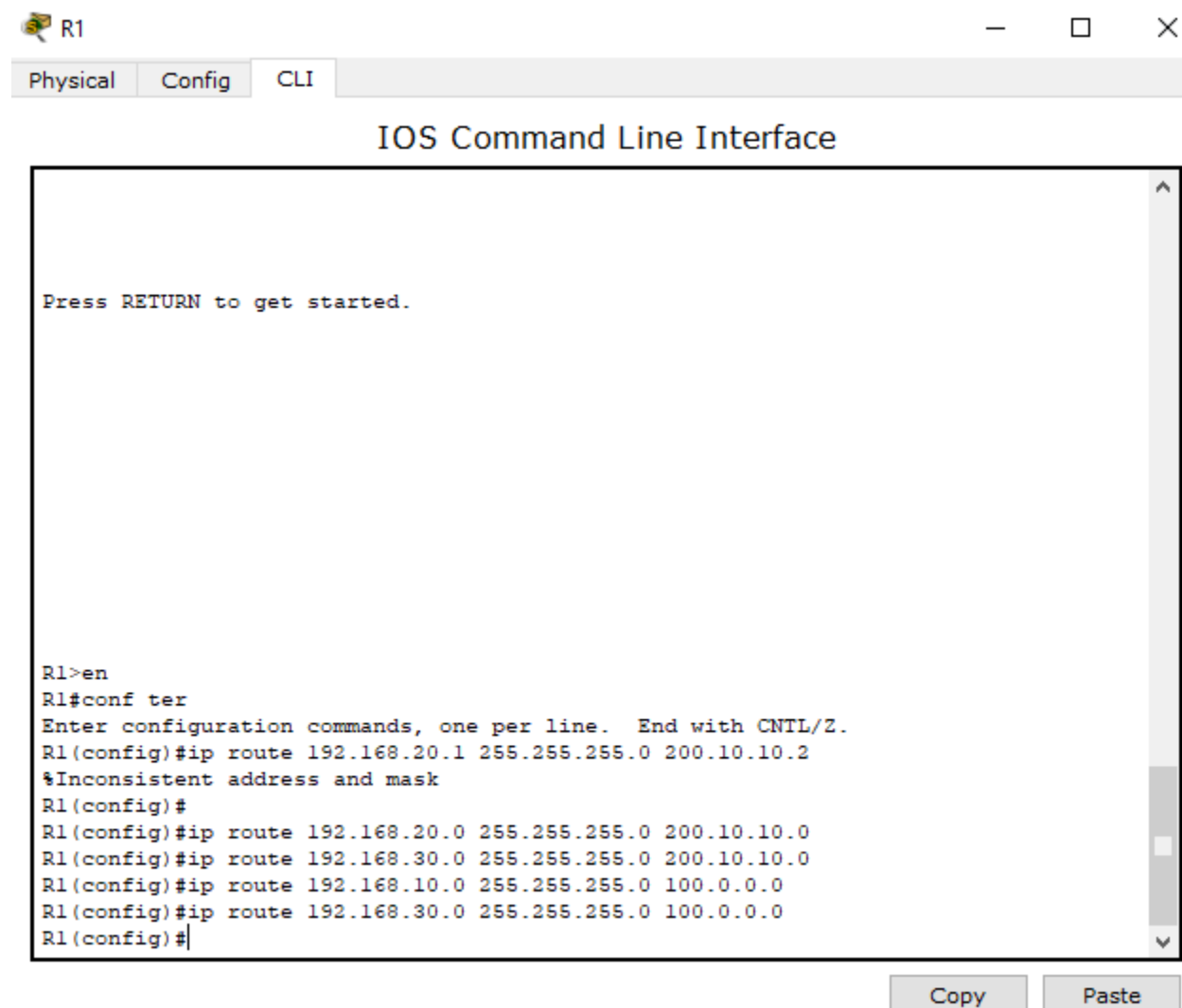
## IP Route in R1:

```
ip route 192.168.20.0 255.255.255.0 200.10.10.0
```

```
ip route 192.168.30.0 255.255.255.0 200.10.10.0
```

```
ip route 192.168.10.0 255.255.255.0 100.0.0.0
```

```
ip route 192.168.30.0 255.255.255.0 100.0.0.0
```





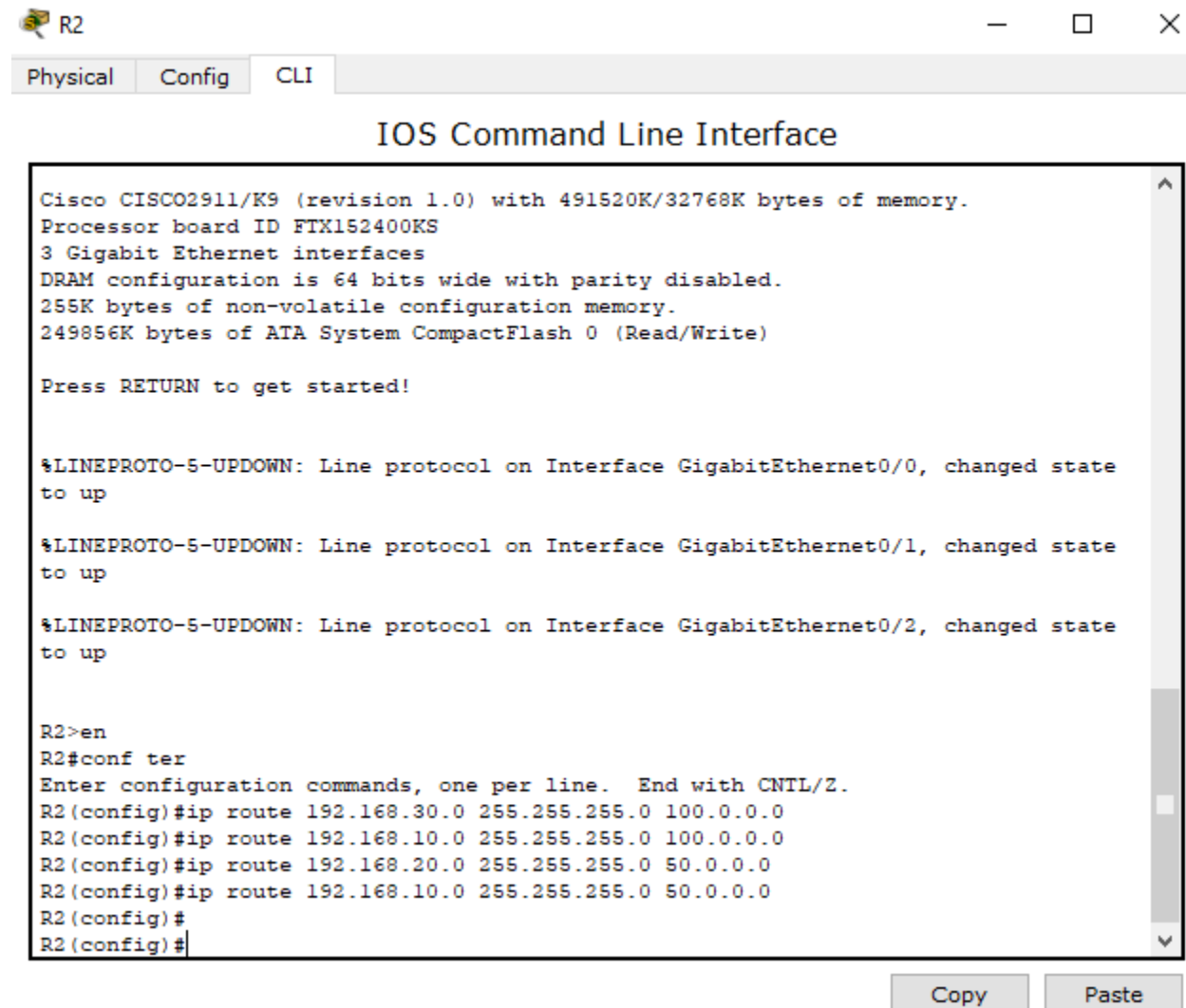
## IP Route in R2:

```
ip route 192.168.30.0 255.255.255.0 100.0.0.0
```

```
ip route 192.168.10.0 255.255.255.0 100.0.0.0
```

```
ip route 192.168.20.0 255.255.255.0 50.0.0.0
```

```
ip route 192.168.10.0 255.255.255.0 50.0.0.0
```



The screenshot shows a Cisco IOS CLI window titled "R2" with three tabs: "Physical", "Config", and "CLI". The "CLI" tab is active, displaying the "IOS Command Line Interface". The window shows the following text:

```
Cisco CISCO2911/K9 (revision 1.0) with 491520K/32768K bytes of memory.
Processor board ID FTX152400KS
3 Gigabit Ethernet interfaces
DRAM configuration is 64 bits wide with parity disabled.
255K bytes of non-volatile configuration memory.
249856K bytes of ATA System CompactFlash 0 (Read/Write)

Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state
to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state
to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/2, changed state
to up

R2>en
R2#conf ter
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#ip route 192.168.30.0 255.255.255.0 100.0.0.0
R2(config)#ip route 192.168.10.0 255.255.255.0 100.0.0.0
R2(config)#ip route 192.168.20.0 255.255.255.0 50.0.0.0
R2(config)#ip route 192.168.10.0 255.255.255.0 50.0.0.0
R2(config)#
R2(config)#
```

At the bottom right of the window, there are two buttons: "Copy" and "Paste".

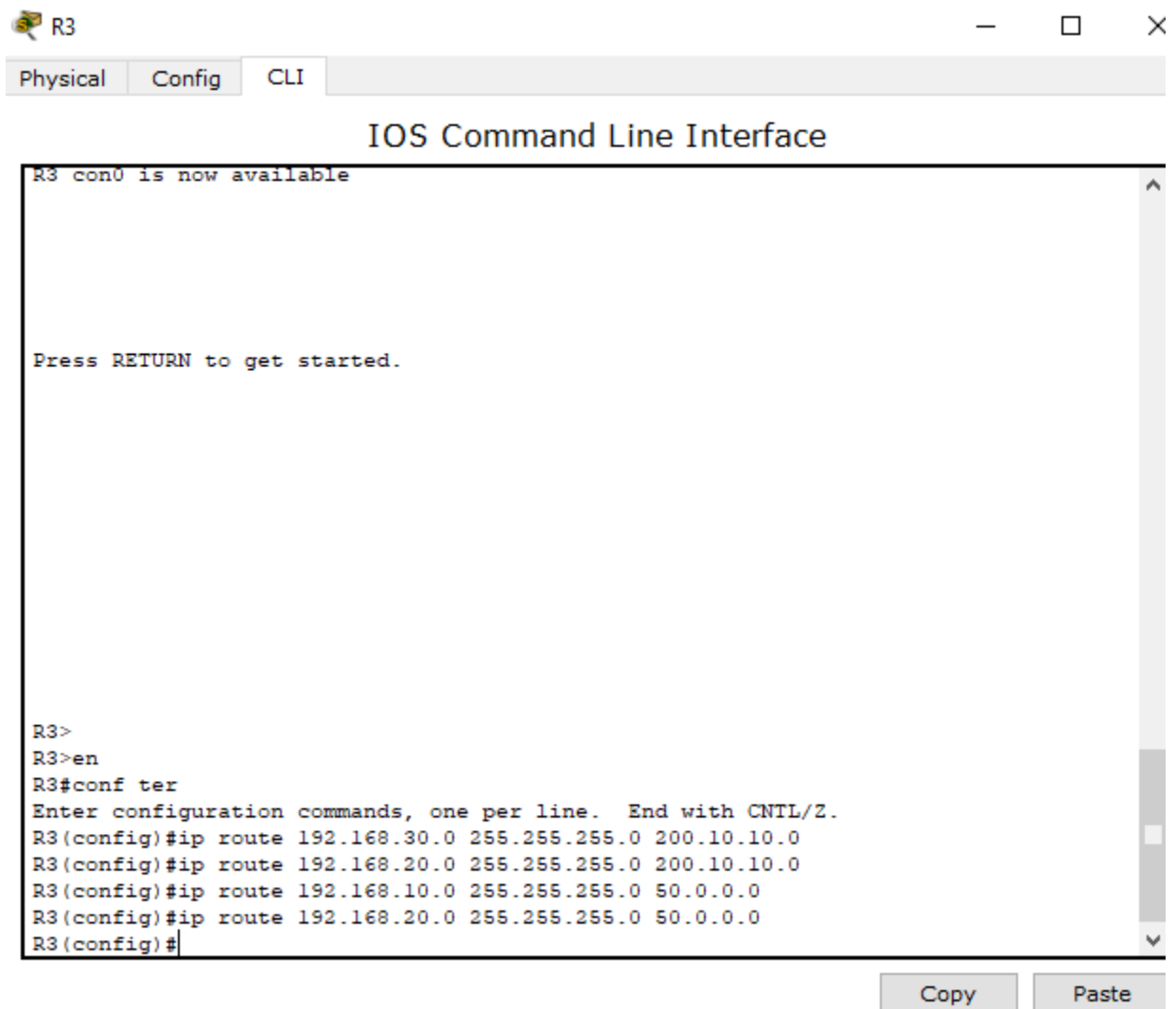
## IP Route in R3:

```
ip route 192.168.30.0 255.255.255.0 200.10.10.0
```

```
ip route 192.168.20.0 255.255.255.0 200.10.10.0
```

```
ip route 192.168.10.0 255.255.255.0 50.0.0.0
```

```
ip route 192.168.20.0 255.255.255.0 50.0.0.0
```



**IP Configuration** X

## IP Configuration

☒ DHCP☐ Static

DHCP request successful.

IP Address

192.168.30.2

Subnet Mask

255.255.255.0

Default Gateway

192.168.30.1

DNS Server

## IPv6 Configuration

☐ DHCP☐ Auto Config☒ Static

IPv6 Address

Link Local Address

FE80::2D0:97FF:FE5E:3B72

IPv6 Gateway

IPv6 DNS Server

**IP Configuration** X

## IP Configuration

☒ DHCP ☐ Static

IP Address 192.168.20.2

Subnet Mask 255.255.255.0

Default Gateway 192.168.20.1

DNS Server

## IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address

Link Local Address FE80::20D:BDFF:FE1B:2B29

IPv6 Gateway

IPv6 DNS Server

**IP Configuration** X

## IP Configuration

☒ DHCP ☐ Static

IP Address 192.168.10.2

Subnet Mask 255.255.255.0

Default Gateway 192.168.10.1

DNS Server

## IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::202:4AFF:FEB6:5A12

IPv6 Gateway

IPv6 DNS Server



[SUCCESSFUL]

