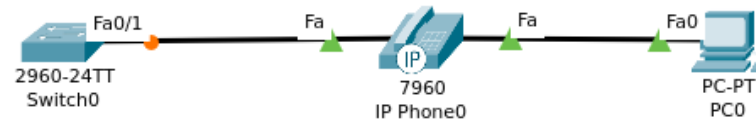Name: J Kevin Immanuel
College: VIT Chennai

Q8)

Assigning VLAN in Switch:

```
Switch(config)#
Switch(config)#
Switch(config)#interf
Switch(config)#vlan 10
Switch(config-vlan)#name DATA
Switch(config-vlan)#ex
Switch(config)#vlan 20
Switch(config-vlan)#name VOICE
Switch(config-vlan)#ex
Switch(config)#
Switch(config)#int fa0/1
Switch(config-if)#switchport mode access
Switch(config-if)#
Switch(config-if)#switchport access vlan 10
Switch(config-if)#switchport voice vlan 20
Switch(config-if)#
Switch(config-if)#ex
Switch(config)#do show vlan br

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/2, Fa0/3, Fa0/4, Fa0/5
                                                Fa0/6, Fa0/7, Fa0/8, Fa0/9
                                                Fa0/10, Fa0/11, Fa0/12, Fa0/13
                                                Fa0/14, Fa0/15, Fa0/16, Fa0/17
                                                Fa0/18, Fa0/19, Fa0/20, Fa0/21
                                                Fa0/22, Fa0/23, Fa0/24, Gig0/1
                                                Gig0/2
10   DATA                             active    Fa0/1
20   VOICE                            active    Fa0/1
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active
Switch(config)#
```

Further Method:

I tried to use a DHCP server to assign both Data and Voice VLANs Dynamic IP. Here is the steps:

Create a DHCP server and add DHCP ip pool:

```
  LINE    <cr>
Router(config)#
Router(config)#
Router(config)#
Router(config)#int fa0/0.10
Router(config-subif)#encap
Router(config-subif)#encapsulation d
Router(config-subif)#encapsulation dot1Q 10
Router(config-subif)#ip add 192.168.10.1 255.255.255.0
Router(config-subif)#ex
Router(config)#int fa0/0.20
Router(config-subif)#
Router(config-subif)#encca
Router(config-subif)#encc
Router(config-subif)#enca
Router(config-subif)#encapsulation d10
Router(config-subif)#encapsulation d
Router(config-subif)#encapsulation dot1Q 20
Router(config-subif)#ip add 192.168.20.1 255.255.255.0
Router(config-subif)#ex
Router(config)#int fa0/0
Router(config-if)#no shutdownd
                         ^
% Invalid input detected at '^' marker.

Router(config-if)#no shutdown
Router(config-if)#
Router(config-if)#ex
Router(config)#ip dhcp exclu
Router(config)#ip dhcp excluded-address 192.168.10.01 192.168.10.5
Router(config)#ip dhcp excluded-address 192.168.20.01 192.168.20.5
Router(config)#ip dhcp pool DATA
Router(dhcp-config)#network 192.168.10.0 255.255.255.0
Router(dhcp-config)#defaul
```
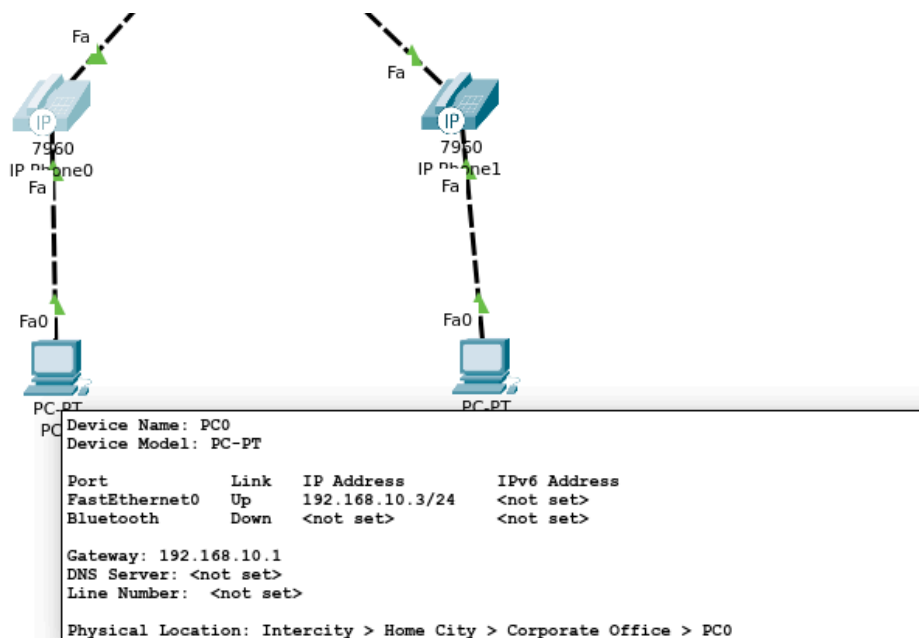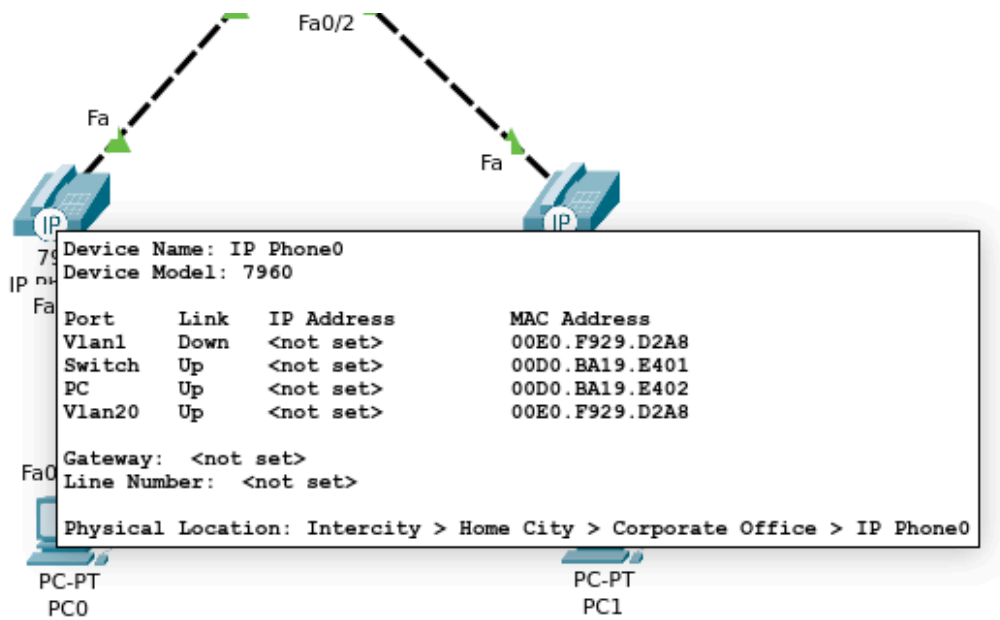
```
router(config)#ip dhcp pool VOICE
router(dhcp-config)#network 192.168.20.0 255.255.255.0
router(dhcp-config)#defa
router(dhcp-config)#default-router 192.168.20.1
router(dhcp-config)#option 150 ip 192.168.20.1
router(dhcp-config)#exit
router(config)#telephone
router(config)#telephon
router(config)#telephony-service
router(config-telephony)#max-dn 2
router(config-telephony)#max-ephones 2
router(config-telephony)#ip sourc
router(config-telephony)#ip source-address 192.168.20.1 port 2000
router(config-telephony)#
router(config-telephony)#
router(config-telephony)#ephone--dn 1
                          ^
: Invalid input detected at '^' marker.

router(config-telephony)#ephone-dn 1
router(config-ephone-dn)#number 0001
router(config-ephone-dn)#ephone-dn 2
router(config-ephone-dn)#number 0002
router(config-ephone-dn)#exit
router(config)#ephone 1
router(config-ephone)#type ?
  7960  Cisco IP Phone 7960
  CIPC  Cisco IP Phone CIPC
  ata   ATA  phone emulation for analog phone
router(config-ephone)#type 7960
```

However, after following all the steps, I found out that only my PC have IP assigned and not the VoIP Phones:


```
Device Name: PC0
Device Model: PC-PT

Port           Link   IP Address         IPv6 Address
FastEthernet0  Up     192.168.10.3/24    <not set>
Bluetooth      Down   <not set>          <not set>

Gateway: 192.168.10.1
DNS Server: <not set>
Line Number:  <not set>

Physical Location: Intercity > Home City > Corporate Office > PC0
```

Fa0/2

Fa

Fa

```
Device Name: IP Phone0
Device Model: 7960

Port      Link    IP Address          MAC Address
Vlan1     Down    <not set>           00E0.F929.D2A8
Switch    Up      <not set>           00D0.BA19.E401
PC        Up      <not set>           00D0.BA19.E402
Vlan20    Up      <not set>           00E0.F929.D2A8

Gateway:    <not set>
Line Number:    <not set>

Physical Location: Intercity > Home City > Corporate Office > IP Phone0
```

PC-PT
PC0

PC-PT
PC1

All steps had been followed correctly, but no reason was exactly found out why the IP was not being assigned.