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Mode

Switch>	User mode
Switch#	Privileged mode
Switch(config)#	Global configuration mode
Switch(config-if)#	Interface mode

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Basic Switch Config

```
Switch>enable
Switch#configure terminal
Switch(config)#
```

```
Switch(config)#hostname Cisco
Cisco(config)#
```

```
Switch#copy running-config startup-config    --> SAVE CONFIG
```

```
Switch#show running-config    --> RAM
Switch#show startup-config    --> NVRAM
```

-----  
Password

```
Switch(config)#enable password cisco
Switch(config)#enable secret class
```

-----  
Password Encryption (Encrypts clear text password)

```
Switch(config)#service password-encryption
```

-----  
Setup Clock

```
Switch(config)#clock timezone PST -8    --> Timezone
Switch(config)#clock summer-time PDT recurring    --> Summer Time
Switch#clock set 21:27:00 26 Aug 2012    --> Set Time
```

```
Switch#show clock
21:27:44.611 PDT Sun Aug 26 2012
```

-----  
Banner

```
Switch(config)#banner motd #
*****
*****Authorized Personnel Only!*****
*****
#
```

-----  
Restting Switch Config

```
Switch#delete flash:vlan.dat
Switch#clear startup-config
Switch#reload
```

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Console Password

```
Switch(config)#line console 0
Switch(config-line)#password abc
Switch(config-line)#login
```

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### Vlan Configuration

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```
Switch(config)#vlan 10
Switch(config-vlan)#name IT

Switch(config)# vlan 100,200,300-310,400
```

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### Assigning Ports to VLANs

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```
Switch(config)#interface fastethernet 0/1
Switch(config-if)#switchport access vlan 10
```

```
Switch(config)#interface range fa 0/1 - 10
Switch(config-if)#switchport access vlan 10
```

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### Assigning Access mode

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```
Switch(config)#interface fastethernet 0/1
Switch(config-if)#switchport mode access
```

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### Assigning Trunk mode

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```
Switch(config)#interface fastethernet 0/1
Switch(config-if)#switchport trunk encapsulation dot1q
Switch(config-if)#switchport mode trunk
```

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### Setting IP Addresses on Router interface

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```
Router(config)#interface fa 0/0
Router(config-if)#ip address 10.1.1.1 255.255.255.0
Router(config-if)#no shut
Router(config-if)#exit
```

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### Switch Protocols

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#### Trunking Protocol(Language)

- ISL(Inter-Switch Link - Cisco proprietary)
  - Adds 26Bytes Header & 4Bytes Trailer
- 802.1q(dot1q-IEEE Standard)
  - Adds 4Bytes tag end of Layer 2

DTP(Dynamic Trunking Protocol)-Negotiates trunking

- Dynamic Desirable - on(can't turn off)
- Dynamic Auto - on(can't turn off)
- Trunk - on(can turn off)
- switchport nonegotiate

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#### DTP(Dynamic Trunking Protocol)

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```
Switch(config)#interface fastethernet 0/1
Switch(config-if)#switchport mode dynamic desirable
```

--&gt; Active

CCNA

```
Switch(config)#interface fastethernet 0/1  
Switch(config-if)#switchport mode dynamic auto
```

--> Passive