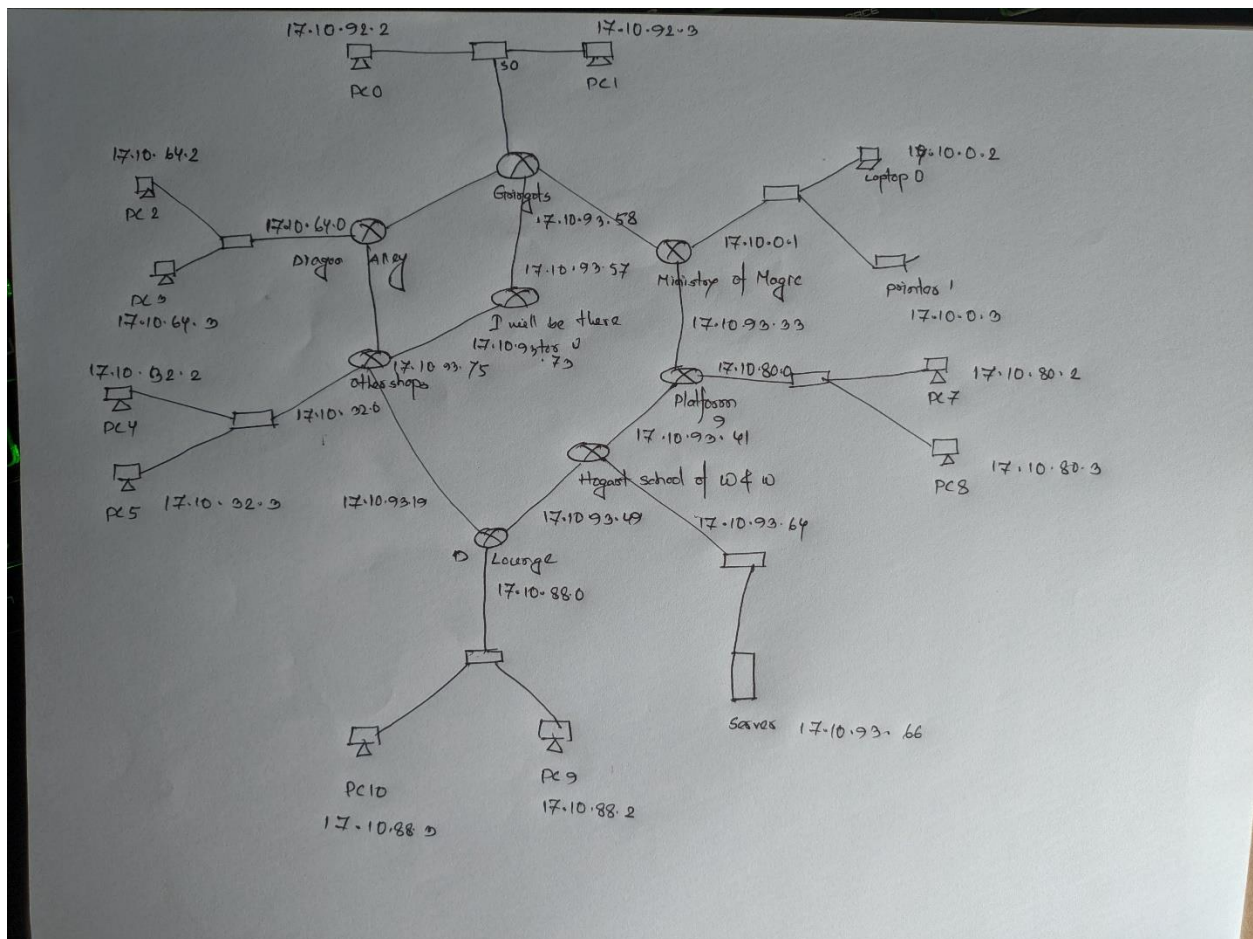# CSE421 Project
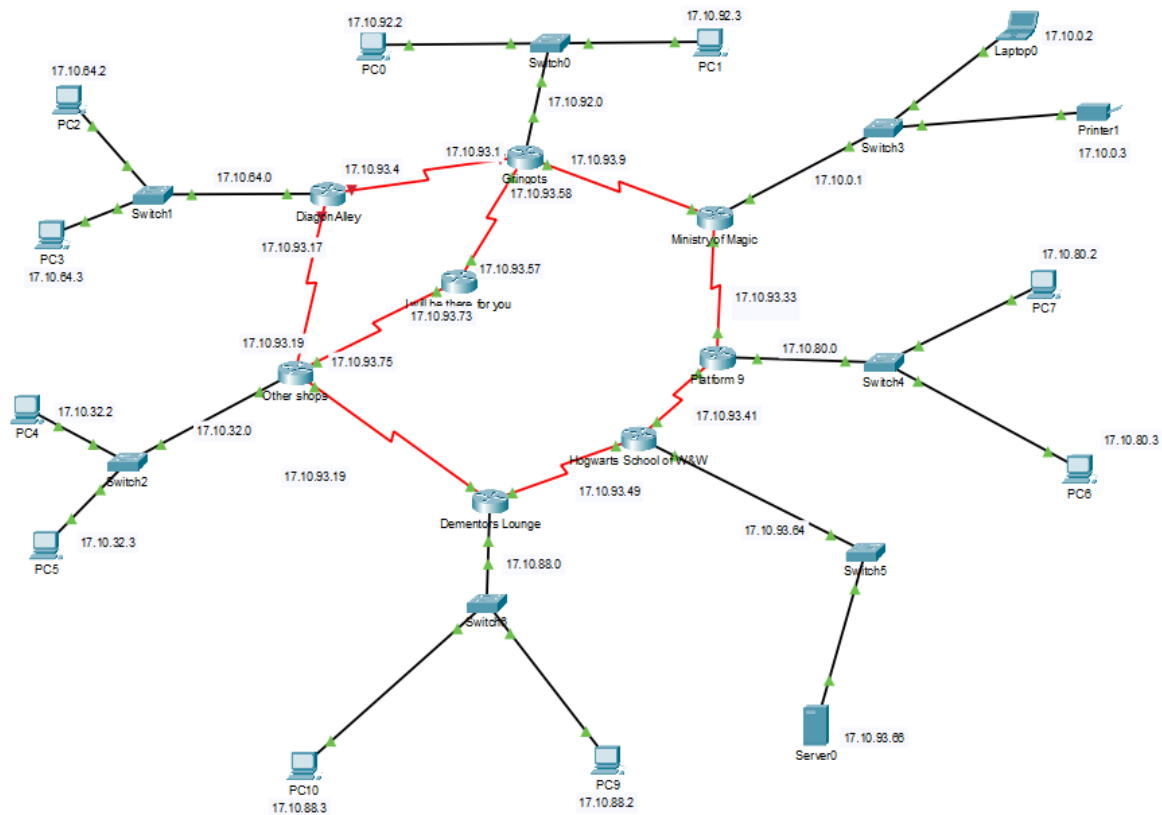
Group 22
Project no: 2

ID: 17301108

ID: 17301124

Configuration:

Gringotts:
Router>enable
Router#
Router# configure terminal
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 17.10.92.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface Serial2/0

Router(config-if)#ip address 17.10.93.1 255.255.255.248
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)ip address 17.10.93.9 255.255.255.248
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#ip route 17.10.64.0 255.255.240.0 17.10.93.4
Router(config)#ip route 17.10.32.0 255.255.224.0 17.10.93.4
Router(config)#ip route 17.10.0.0 255.255.224.0 17.10.93.11
Router(config)#ip route 17.10.80.0 255.255.248.0 17.10.93.11
Router(config)#ip route 17.10.93.64 255.255.255.248 17.10.93.11
Router(config)#ip route 17.10.88.0 255.255.252.0 17.10.93.11

Diagon Alley:
Router(config)#ip route 17.10.32.0 255.255.224.0 17.10.93.19
Router(config)#ip route 17.10.92.0 255.255.255.0 17.10.93.1
Router(config)#ip route 17.10.0.0 255.255.224.0 17.10.93.1
Router(config)#ip route 17.10.80.0 255.255.248.0 17.10.93.1
Router(config)#ip route 17.10.93.64 255.255.255.248 17.10.93.1
Router(config)#ip route 17.10.88.0 255.255.252.0 17.10.93.1

Others Shop:
Router(config)#ip route 17.10.92.0 255.255.255.0 17.10.93.17
Router(config)#ip route 17.10.64.0 255.255.240.0 17.10.93.17
Router(config)#ip route 17.10.0.0 255.255.224.0 17.10.93.17
Router(config)#ip route 17.10.80.0 255.255.248.0 17.10.93.17
Router(config)#ip route 17.10.93.64 255.255.255.248 17.10.93.17
Router(config)#ip route 17.10.88.0 255.255.252.0 17.10.93.17

Backup route (I will be there for you):
Router(config)#ip route 17.10.32.0 255.255.224.0 17.10.93.75 5
Router(config)#ip route 17.10.92.0 255.255.255.0 17.10.93.58 5
Router(config)#ip route 17.10.0.0 255.255.224.0 17.10.93.58
Router(config)#ip route 17.10.80.0 255.255.248.0 17.10.93.58
Router(config)#ip route 17.10.93.64 255.255.255.248 17.10.93.58
Router(config)#ip route 17.10.88.0 255.255.252.0 17.10.93.58

Dynamic

Ministry of Magic
Router>enable
Router#
Router#configure terminal

Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 17.10.0.1 255.255.224.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#ip address 17.10.93.11 255.255.255.248
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)ip address 17.10.93.33 255.255.255.248
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#version 2
Router(config-router)#no auto-summary
Router(config-router)#network 17.10.0.0
Router(config-router)#network 17.10.93.8
Router(config-router)#network 17.10.93.32
Router(config-router)#redistribute static
Router(config-router)#exit
Router(config)#ip route 17.10.92.0 255.255.255.0 17.10.93.9
Router(config)#ip route 17.10.64.0 255.255.240.0 17.10.93.9
Router(config)#ip route 17.10.32.0 255.255.224.0 17.10.93.9
Router(config)#exit

Platform 9

Router(config)#router rip
Router(config-router)#version 2
Router(config-router)#no auto-summary
Router(config-router)#network 17.10.80.0
Router(config-router)#network 17.10.93.32
Router(config-router)#network 17.10.93.40
Router(config-router)#redistribute static
Router(config-router)#exit

Hogwarts School of Witchcraft and Wizardry

Router(config)#router rip
Router(config-router)#version 2
Router(config-router)#no auto-summary
Router(config-router)#network 17.10.93.64
Router(config-router)#network 17.10.93.48
Router(config-router)#network 17.10.93.64
Router(config-router)#redistribute static

Router(config-router)#

Dementors Lounge

Router(config)#router rip
Router(config-router)#version 2
Router(config-router)#no auto-summary
Router(config-router)#network 17.10.88.0
Router(config-router)#network 17.10.93.24
Router(config-router)#network 17.10.93.48
Router(config-router)#redistribute static
Router(config-router)#end
Router#

Ministry of Magic (6546) 6548
Other shops (4565) 4567
Diagon Alley (3000) 3002
Platform 9 ¾ (1236) 1238
Dementors Lounge (756) 758
Gringotts (200) 202
Hogwarts School of Witchcraft and Wizardry (1) 3
Inter- router (18) 32

Total 16,350

17.10.0.0/17 has 131072 hosts

Subnet need 16350 hosts

Name	Network Address	Slash	Mask
Ministry of Magic	17.10.0.0	/19	255.255.224.0
Other shops	17.10.32.0	/19	255.255.224.0
Diagon Alley	17.10.64.0	/20	255.255.240.0
Platform 9	17.10.80.0	/21	255.255.248.0
Dementors Lounge	17.10.88.0	/22	255.255.252.0
Gringots	17.10.92.0	/24	255.255.255.0
Gringots - Diagon Alley	17.10.93.0	/29	255.255.255.248
Gringots - Ministry of Magic	17.10.93.8	/29	255.255.255.248
Diagon Alley - Others shop	17.10.93.16	/29	255.255.255.248
Others shop - Dementors Lounge	17.10.93.24	/29	255.255.255.248
Ministry of Magic - Platform 9	17.10.93.32	/29	255.255.255.248
Platform 9 - Hogwarts School of Witchcraft and Wizardry	17.10.93.40	/29	255.255.255.248
Hogwarts School of Witchcraft and Wizardry - Dementors Lounge	17.10.93.48	/29	255.255.255.248
Backup Router - Gringots	17.10.93.56	/29	255.255.255.248
Hogwarts School of Witchcraft and Wizardry	17.10.93.64	/29	255.255.255.248
Othershop - Backup Router	17.10.93.72	/29	255.255.255.248

17.10.0.0/17 → Network

(8192) 17.10.0.0/19(a) 17.10.32.0/19 (b) 17.10.64.10/19

(4096) 17.10.64.10/20(c) 17.10.80.0/20

(2098) 17.10.80.0/21(d) 17.10.88.0/21

(1024) 17.10.88.0/22(e) 17.10.92.0/22

(256) 17.10.92.0/24 (f) 17.10.93.0/24

(8) 17.10.93.0/29 - - - - - - - - - - -

Addressing Table

Device	Interface	IPV4 Address	Subnet Mask	Default Gateway
Gringotts	F0/0	17.10.92.1	255.255.255.0	
	S2/0	17.10.93.1	255.255.255.248	
	S3/0	17.10.93.9	255.255.255.248	
	S6/0	17.10.93.58	255.255.255.248	
Diagon Alley	F0/0	17.10.64.1	255.255.240.0	
	S2/0	17.10.93.17	255.255.255.248	
	S3/0	17.10.93.4	255.255.255.248	
Others Shops	F0/0	17.10.32.1	255.255.240.0	
	S2/0	17.10.93.25	255.255.255.248	
	S3/0	17.10.93.19	255.255.255.248	
	S7/0	17.10.93.75	255.255.255.248	
Dementors Lounge	F0/0	17.10.88.1	255.255.252.0	
	S2/0	17.10.93.51	255.255.255.248	
	S3/0	17.10.93.27	255.255.255.248	
Hogwarts School of W&W	F0/0	17.10.93.65	255.255.255.248	
	S2/0	17.10.93.43	255.255.255.248	
	S3/0	17.10.93.49	255.255.255.248	
Platform 9	F0/0	17.10.80.1	255.255.248.0	
	S2/0	17.10.93.35	255.255.255.248	
	S3/0	17.10.93.41	255.255.255.248	
Ministry of Magic	F0/0	17.10.0.0	255.255.224.0	
	S2/0	17.10.93.11	255.255.255.248	
	S3/0	17.10.93.33	255.255.255.248	
I will be there for you	S2/0	17.10.93.57	255.255.255.248	
	S3/0	17.10.93.73	255.255.255.248	
PC0	NIC	17.10.92.2	255.255.255.0	17.10.92.1
PC1	NIC	17.10.92.3	255.255.255.0	17.10.92.1
PC2	NIC	17.10.64.2	255.255.240.0	17.10.64.1
PC3	NIC	17.10.64.3	255.255.240.0	17.10.64.1
PC4	NIC	17.10.32.2	255.255.240.0	17.10.32.1
PC5	NIC	17.10.32.3	255.255.240.0	17.10.32.1
PC6	NIC	17.10.80.3	255.255.248.0	17.10.80.1
PC7	NIC	17.10.80.2	255.255.248.0	17.10.80.1
PC9	NIC	17.10.88.2	255.255.248.0	17.10.88.1
PC10	NIC	17.10.88.3	255.255.248.0	17.10.88.1

Printer1	NIC	17.10.0.3	255.255.224.0	17.10.10.1
Laptop0	NIC	17.10.0.2	255.255.224.0	17.10.10.1
Server	NIC	17.10.93.66	255.255.255.248	17.10.93.65