FACULTY OF COMPUTING

SEMESTER 1 2024/2025

SECR 1213 NETWORK COMMUNICATIONS

SECTION 02

PROJECT TASK 5

LECTURER: ASSOC. PROF. TS. DR. ISMAIL FAUZI BIN ISNIN

GROUP FOUREVER

Student Name	Matric No.
LAM YOKE YU	A23CS0233
GOE JIE YING	A23CS0224
TEH RU QIAN	A23CS0191
TAN YI YA	A23CS0187

Network Address

Network Address: 10.48.0.0

Subnet Mask: /12 = 255.240.0.0

      Subnet Mask in Binary

      11111111.11110000.00000000.00000000 = 255.240.0.0

Available IP Address Range: 10.48.0.0 - 10.63.255.255

      Available IP Address Range in Binary

      00001010.00110000.00000000.00000000 = 10.48.0.0

      00001010.00111111.11111111.11111111 = 10.63.255.255

Each lab would have a subnet. Besides, the video conferencing room, hybrid classroom, student lounge and the technician office will each have a subnet.

Area	Required IPs	Subnet Size (2^n) $2^n > IPs + 2$	Subnet Mask	Network Address	Broadcast Address	Usable IP Range
General Purpose Lab 1	30 workstation + 1 lecturer's workstation + 1 wireless access point = 32 IPs	$2^n > 32 + 2$ $2^6 > 32 + 2$	$/32 - 6 = /26$ 11111111.11111111. 11111111.11000000 = 255.255.255.192	10.48.0.0/ 26	00001010.00110000. 00000000.00111111 = 10.48.0.63	10.48.0.0 - 10.48.0.62
General Purpose Lab 2	30 workstation + 1 lecturer's workstation + 1 wireless access point = 32 IPs	$2^n > 32 + 2$ $2^6 > 32 + 2$	$/32 - 6 = /26$ 11111111.11111111. 11111111.11000000 = 255.255.255.192	10.48.0.6 4/26	00001010.00110000. 00000000.01111111 = 10.48.0.127	10.48.0.64 - 10.48.0.126

Cisco Network Lab	30 workstation + 1 lecturer's workstation = 31 IPs	$2^n > 31 + 2$ $2^6 > 31 + 2$	$/32 - 6 = /26$ 11111111.11111111. 11111111.11000000 = 255.255.255.192	10.48.0.128/26	00001010.00110000. 00000000.10111111 = 10.48.0.191	10.48.0.128 - 10.48.0.190
Embedded Lab	30 workstation + 1 lecturer's workstation = 31 IPs	$2^n > 31 + 2$ $2^6 > 31 + 2$	$/32 - 6 = /26$ 11111111.11111111. 11111111.11000000 = 255.255.255.192	10.48.0.192/26	00001010.00110000. 00000000.11111111 = 10.48.0.255	10.48.0.192 - 10.48.0.254
Technician Office	4 workstation = 4 IPs	$2^n > 4 + 2$ $2^3 > 4 + 2$	$/32 - 3 = /29$ 11111111.11111111. 11111111.11111000 = 255.255.255.248	10.48.1.0/29	00001010.00110000. 00000001.00000111 = 10.48.1.7	10.48.1.1 - 10.48.1.6
Video Conferencing Room	1 smart TV + 1 workstation = 2 IPs	$2^n > 2 + 2$ $2^2 > 2 + 2$	$/32 - 2 = /30$ 11111111.11111111. 11111111.11111100 = 255.255.255.252	10.48.1.8/30	00001010.00110000. 00000001.00001011 = 10.48.1.11	10.48.1.9 - 10.48.1.10
Student Lounge	4 workstations = 4 IPs	$2^n > 4 + 2$ $2^3 > 4 + 2$	$/32 - 3 = /29$ 11111111.11111111. 11111111.11111000 = 255.255.255.248	10.48.1.12/29	00001010.00110000. 00000001.00010011 = 10.48.1.19	10.48.1.13 - 10.48.1.18
Hybrid Classroom	1 smart TV + 1 workstation = 2 IPs	$2^n > 2 + 2$ $2^2 > 2 + 2$	$/32 - 2 = /30$ 11111111.11111111. 11111111.11111100 = 255.255.255.252	10.48.1.20/30	00001010.00110000. 00000001.00010111 = 10.48.1.23	10.48.1.21 - 10.48.1.22

Meeting Minutes

DATE/TIME	23/12/2024 9:00a.m.
LOCATION	Online @google meet
AGENDA	Discussion on IP Addressing Scheme
MEETING MC	Tan Yi Ya

ATTENDANCE		
NAME	**TIME**	**REASON FOR ABSENCE**
Goe Jie Ying	9:00a.m.	-
Lam Yoke Yu	9:00a.m.	-
Tan Yi Ya	9:00a.m.	-
Teh Ru Qian	9:00a.m.	-

MINUTES			
NO.	**ITEM DISCUSSED**	**IDEA/SUGGESTIONS AND PERSON GIVING IT**	**PERSON IN CHARGE & DATE**
1	IP Addressing Scheme	All • Discuss on the best division of network for all lab	All, 23/12
2	Discussion Subnet Allocation	All • Discussed individual subnets for labs, offices, and meeting rooms.	All, 23/12
3	Task Distribution	Ru Qian • IP Assignation for Video Conferencing Room and Student Lounge Yi Ya • IP Assignation for Hybrid Classroom Jie Ying • IP Assignation for Cisco Network Lab, Embedded Lab and Technical Office Yoke Yu • IP Assignation for General	All, 23/12

		Purpose Lab	
4	Next Meeting	26/12 - Progress Checking	All, 26/12
5	End of Meeting	10:50 a.m.	All, 23/12