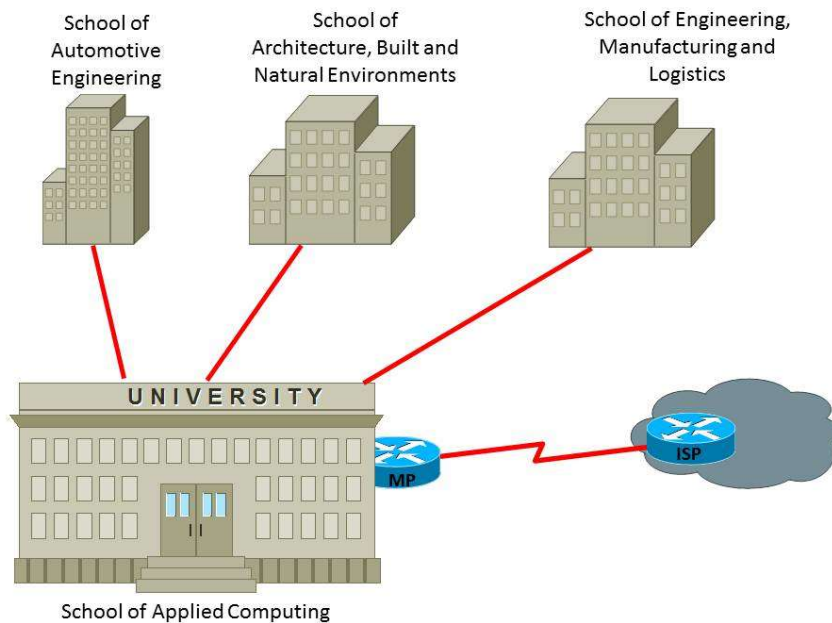




As a network administrator, you are asked to design a hierarchical IP addressing scheme for Faculty's networks. Choose a suitable network address to support more than 2000 users and future growth. The Faculty has four Schools which are shown on the above figure.

Design a suitable IP addressing scheme to support the 4 schools:

School of Applied Computing	School of Automotive Engineering	School of Architecture, Built and Natural Environment	School of Engineering, Manufacturing and logistics
40 staff	30 staff	32 staff	45 staff
Cisco Lab – 30 pcs	NDT Lab – 10 pcs	Water Lab – 12 pcs	Engineering 1 – 28 pcs
Games Lab - 40 pcs	CAD Lab – 20 pcs	Bio Lab – 12 pcs	Engineering 2 – 28 pcs
Electronic Lab – 32 pcs	Room 1 – 25 pcs	Environment Lab – 24 pcs	Engineering 3 – 100 pcs
Room 108 – 30 pcs	Room 2 – 35 pcs	Architect Lab – 60 pcs	Engineering 4 – 100 pcs
Room 110 – 40 pcs	Room 3 – 30 pcs	Room 201 – 16 pcs	Engineering 5 – 80 pcs
Room 111 – 40 pcs	Room 4 – 55 pcs	Room 202 – 32 pcs	Dev Lab – 120 pcs
Room 001 – 90 pcs	Room 5 – 80 pcs	Room 203 – 12 pcs	3D Printer – 10
Room 002 – 60 pcs	Room 6 – 125 pcs	Roller Printer – 4	Cad Printer – 10
Room 209 – 36 pcs.		Cad 3D Modeller – 4	

In addition to the 4 schools above the university will require the following additional networks to be considered and included within the scheme

Test Centre	Open Access (24hr Lab)	Library
15 pcs	250 pcs	50 staff
Printer - 5	Printers – 10	Open Access – 100 pcs
VOIP Phone - 15	Printer Credit device - 2	Automated checkout - 10
Video Conference - 1		Library Search pcs - 15
		VOIP Phone - 30