# COMP9121 Assignment 2 2024 S2

In this assignment, some questions are student number dependent; you will get zero in that question if you use another student's number.

The due date is 27 Oct 2024 at 23:59 and we will open the submission site on Canvas one week before the due date.

Submission instructions. In the "main file submission", you can only upload your answers in a single pdf file. In the "supplementary file submission", zip all your codes in a single zip file and submit. For Q9: you must submit your code; otherwise Q9 will not be marked. Q6: you must submit your code if you did any programming; otherwise your will not get full progress mark. This is one assignment with multiple pieces to submit. Your submission time equals to the submission time of the last piece. Late penalty will be calculated based on this submission time.

1. SDN.

In the following network, the network administrator should achieve the load balancing function: If the traffic is from 11.11.11.0/24 to 11.11.44.0/24, the blue path should be used; If the traffic is from 11.11.22.0/24 to 11.11.44.0/24, the red path should be used; If the traffic is from 11.11.33.0/24 to 11.11.44.0/24, the green path should be used;
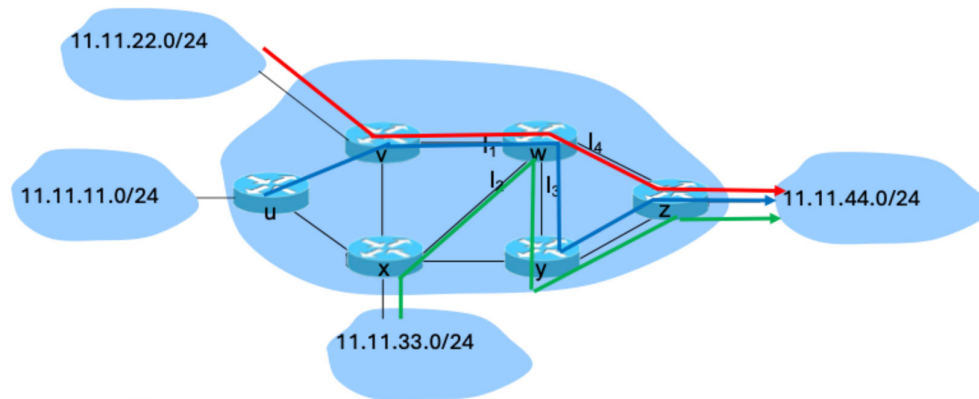
(1) Can this load balancing function be achieved by traditional non-SDN routers? Why or why not?

(2) If SDN is used in the network, please specify the SDN switch table at w. The four interfaces (ports) of the SDN switch are labelled as I_1—I_4 respectively.

Please write necessary entries based on the following flow table format.

Ingress Port	Source MAC	Dest MAC	Eth Type	VLAN ID	Source IP	Dest IP	IP Protocol	Source Port	Dest Port	Action