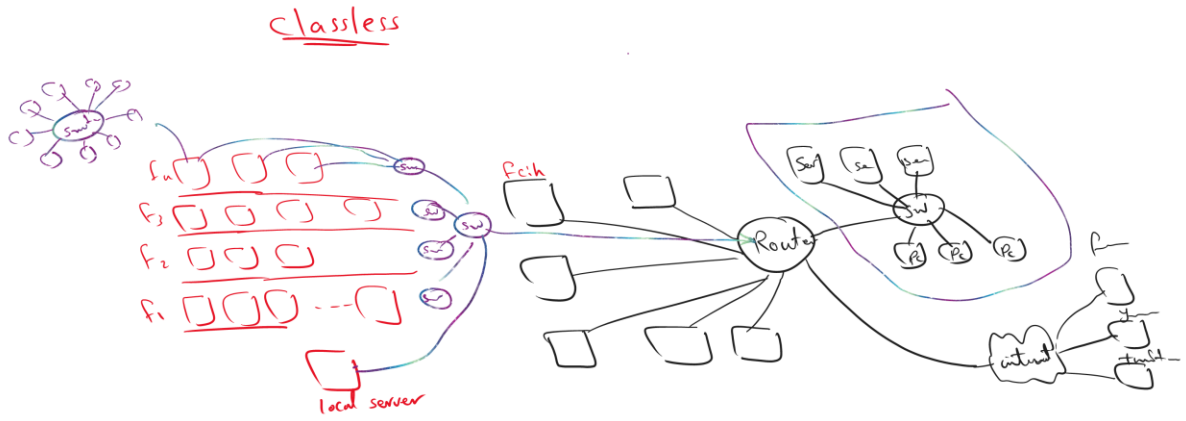
Design a Network for a small university campus.



Description: Design a network for a small university campus

- **The university contains several faculties, at minimum four, and one Scientific Computation Center.**
- **Scientific Computation Center contains several servers that all connected with a switch.**
- **Each faculty is composed of several floors, at minimum four.**
- **Each floor is composed of several labs, at minimum two.**
- **Each lab contains at minimum 5 PCs, all these PCs are connected with switch.**
- **All the switches of the labs in the same floor are connected with a switch.**
- **All the floors are connected by switch that connects with the main router of the university.**
- **- The university router connects all the faculties and the Scientific Computation Center with each other and with the world wide web.**

Please, Apply the following points

1- **Use** <u>**Classless**</u> to distribute the public IP addresses to all sub-networks.
2- **Use the mesh and star topology in the labs design.**
3- **Write three test scenarios to test your network in addition to these scenario example:**
    - **Scenario description:** Pc number 0 on the first floor in the second lab in the faculty of computers & Artificial Intelligence want to access data on the first server in the Scientific Computation Center.
    - **Source IP address:** Pc 0 IP address.
    - **Destination IP address:** Server 0 IP address.
4- **Apply VLAN** configuration in your network and examine it in a separate scenario.
5- **Use the RIP routing protocol.**