Little Kingdom of Jane and Holly

King Thistle, who is the ruler of Little Kingdom lives in a White Castle along with Queen Thistle and princess Holly. Elves live at the Great Elf Valley, which plays the role of a school, library, mission control service and factory for toys and wands. Mr. and Mrs. Elf are Jane's parents. Elves hold the belief that they should never be late to anything. Civil fairies live in the Fairy Village, which consists of toadstools. The Elves operate Elf Rescue, the Elf Farm and the Elf Windmill. King Thistle likes to play golf at the Royal Course. Now, King Thistle has asked Jane to establish networks for their Little Kingdom, but Jane wasn't very good in designing network so he needs you to design the network.

Jane has provided you the list of the locations and their population. Your Job is to design a network infrastructure so that everyone can communication with ease.

*The numbers in brackets () specify the population size of the location. *

	White Castle	Jane's Residence	Elves office for School and library	Elves Factory	Fairy Village	Royal Course
White Castle (15)	**0**					
Jane's Residence (5)	**300**	**0**				
Elves office for School and library (2047)	**400**	**150**	**0**			
Elves Factory and Farm (10000)	**500**	**50**	**200**	**0**		
Fairy Village (700)	**200**	**350**	**110**	**100**	**0**	
Royal Course (200)	**50**	**100**	**550**	**600**	**500**	**0**

While creating the network infrastructure there are certain restrictions and rules that you need to follow:

- Consider each location as a separate network connected by routers.

- For that you need to choose an appropriate network address and from that create subnets to assign to each location.
- Assign ip addresses to all interfaces and devices. You have to show at least two end devices for a location.
- Jane's Residence has a web server where the entire system is operated from. It shows a message ("Welcome to Little Kingdom") in the homepage www.littlekingdom.com when you access the web server.
- Establish connections among all the networks with the shortest route possible.
    - Must have at least one floating route.
    - Must have a backup system to handle missing routing entries.
    - Configure half of the network to be routed dynamically.
    - For assigning IP addresses in Royal Course (200) use DHCP server.
- After completion, make sure that you can ping from a device in one location to another.

Deliverables

- The network mentioned above should be implemented in the packet tracer, with necessary devices and full configuration.
- After completion you should be able to test the conditions imposed.
- As hardcopies, you will have to submit the followings:
    - Network topology diagram with proper labels
    - The configurations of all the routers that you have implemented.
    - VLSM/Network address table.
    - IP address table