****Computer Networks (LAB)

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**Task 1**

**Q1: Difference between all routers in Cisco Packet Tracer:**

* **Generic Routers (1841, 2620, 2811, etc.):** Standard routers with varying performance and features, used for routing between different networks.
* **ISR Routers (1941, 2911, etc.):** Integrated Services Routers, which support additional services like security, VoIP, or VPNs.
* **Use Case:** Choose based on network size, required throughput, and additional services needed.

**Q2: Difference between all switches in Cisco Packet Tracer:**

* **Generic Switches (2950, 2960, etc.):** Basic Layer 2 switches for simple LAN setups.
* **Multilayer Switches (3560, 3650, etc.):** Support both Layer 2 switching and Layer 3 routing functionalities.
* **Use Case:** Use generic switches for basic LAN, and multilayer switches when routing between VLANs is required.

**Q3: Difference between all connection wires in Cisco Packet Tracer:**

* **Copper Straight-through:** Connects different types of devices (e.g., PC to switch).
* **Copper Crossover:** Connects similar devices (e.g., switch to switch).
* **Fiber:** Used for long-distance, high-speed connections.
* **Serial:** Connects routers for WAN links.
* **Use Case:** Choose based on device type and distance requirements.