IEEE (Institute of Electrical and Electronics Engineers)

- IEEE is a global organization that develops technical standards across various fields, including networking, electronics, and telecommunications.
- It is responsible for defining Wi-Fi standards under the IEEE 802.11 family (e.g., 802.11a, 802.11b, 802.11n, 802.11ax).
- Focuses on creating **protocols**, **architectures**, **and specifications** for wireless communication.

WFA (Wi-Fi Alliance)

- WFA is an **industry consortium** that ensures **Wi-Fi products comply** with IEEE standards and can work together.
- It **certifies Wi-Fi devices** for interoperability, security, and performance.
- Introduces consumer-friendly branding, such as Wi-Fi 4 (802.11n), Wi-Fi
 5 (802.11ac), Wi-Fi 6 (802.11ax) to simplify standard names.