**📊 Histogram**

**✅ Purpose:**

To show the **distribution** of **continuous numerical data** (like height, weight, marks, etc.).

**✅ Key Features:**

* Data is divided into **intervals (bins)**.
* **X-axis**: Intervals of data.
* **Y-axis**: Frequency (how many values fall into each interval).
* **Bars touch each other**, showing continuity.

**✅ Example Use:**

To show how many students scored marks between:

* 0–10,
* 10–20,
* 20–30, and so on.

**✅ Example:**

| **Marks Range** | **Frequency** |
| --- | --- |
| 0–10 | 2 |
| 10–20 | 5 |
| 20–30 | 10 |

This will be plotted as bars where each bar’s height = frequency.

**📈 Line Chart**

**✅ Purpose:**

To show **trends over time** or a **sequence** (e.g., performance, temperature, stock price, etc.).

**✅ Key Features:**

* **X-axis**: Time or sequence.
* **Y-axis**: Values of a variable.
* Data points are **connected by lines**.

**✅ Example Use:**

To show how a student’s marks improved over 5 exams.

**✅ Example:**

| **Exam** | **Marks** |
| --- | --- |
| 1 | 45 |
| 2 | 55 |
| 3 | 65 |
| 4 | 60 |
| 5 | 70 |

Plotted as a line going through (1,45) → (2,55) → (3,65) → etc.

**✅ Summary Table**

| **Feature** | **Histogram** | **Line Chart** |
| --- | --- | --- |
| Data Type | Continuous numerical data | Sequential/Time-series data |
| Used For | Distribution | Trends/changes over time |
| Appearance | Bars (touch each other) | Points connected with lines |
| X-Axis | Data intervals (bins) | Time or ordered categories |
| Y-Axis | Frequency | Measured values |