SUMMARY REPORT ON PLACEMENT DATA

Objective:

To understand the central tendencies (Mean, Median, Mode) of the dataset containing academic scores and salary outcomes on quantitative_columns, dispersion (quartiles), and outlier detection (99th percentile).

Dataset Attributes:

Column	Description
`sl_no`	Serial number (identifier)
`ssc_p`	Secondary Education Percentage
`hsc_p`	Higher Secondary Education %
`degree_p`	Undergraduate Degree %
`etest_p`	Employability Test %
`mba_p`	MBA %
`salary`	Annual salary (₹)

Statistical Summary

```
discriptive_stats = pd.DataFrame(index = ["Mean", "Median", "Mode",], columns=quantitative_columns)
for column in quantitative_columns:
    discriptive_stats.loc["Mean", column] = dataset[column].mean()
    discriptive_stats.loc["Median", column] = dataset[column].median()
    discriptive_stats.loc["Mode", column] = dataset[column].mode()[0]

discriptive_stats
```

✓ 0.0s

	sl_no	ssc_p	hsc_p	degree_p	etest_p	mba_p	salary
Mean	108.0	67.303395	66.333163	66.370186	72.100558	62.278186	288655.405405
Median	108.0	67.0	65.0	66.0	71.0	62.0	265000.0
Mode	1	62.0	63.0	65.0	60.0	56.7	300000.0

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Observations

Academic Scores

- Most students fall within **60–75% range** across `ssc_p`, `hsc_p`, and `degree_p`, with a strong central tendency (mean ≈ median).
- Outliers exist, as evident from max values (`ssc_p = 89.4`, `hsc_p = 97.7`), and the 99th percentiles suggest **very few high-achievers**.

Employability Test (`etest_p`)

- Higher variance observed.
- **Mean (72.1%)** and **Q3 (83.5%)** indicate good test performance by top 25%.
- **Mode = 60%** suggests many scored lower.

MBA Scores

- Fairly concentrated around 62%.
- **Top 1% scored up to 76.11%**, while the **maximum was 77.89%** — no extreme outliers here.

Salary:

- Mean salary: ₹2,88,655
- Median salary: ₹2,65,000
- Mode salary: ₹3,00,000
  This distribution implying some high-paying offers inflating the average.

Quartile	Salary (₹)
Q1	2,40,000
Q2	2,65,000
Q3	3,00,000
Max	9,40,000
Mode	3,00,000

- **Majority of students (75%) earn ≤ ₹3,00,000**
- Mode matches Q3 — **₹3,00,000 is a common**
- Max (₹9,40,000) is a **clear outlier** (likely 1% or fewer)

Interpretation

- Students with mid-to-high academic scores tend to receive average salaries around ₹2.6–3.0 Lakhs.
- The slight differences between mean and median in `salary` suggest **moderate salary disparity**, possibly due to a few outlier job offers.
- **salaries** at Q3 (₹3L) for visualization may improve due to outliers

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