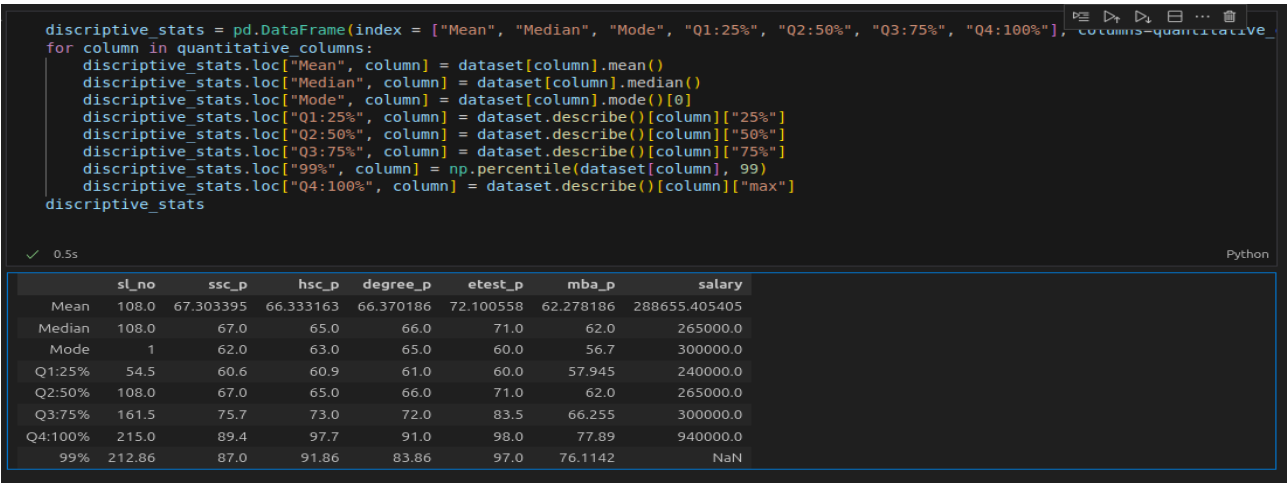**SUMMARY REPORT ON PLACEMENT DATA**

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

```python
discriptive_stats = pd.DataFrame(index = ["Mean", "Median", "Mode", "Q1:25%", "Q2:50%", "Q3:75%", "Q4:100%"], columns=quantitative_
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.loc["Q1:25%", column] = dataset.describe()[column]["25%"]
    discriptive_stats.loc["Q2:50%", column] = dataset.describe()[column]["50%"]
    discriptive_stats.loc["Q3:75%", column] = dataset.describe()[column]["75%"]
    discriptive_stats.loc["99%", column] = np.percentile(dataset[column], 99)
    discriptive_stats.loc["Q4:100%", column] = dataset.describe()[column]["max"]
discriptive_stats
```

✓ 0.5s   Python

	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
Q1:25%	54.5	60.6	60.9	61.0	60.0	57.945	240000.0
Q2:50%	108.0	67.0	65.0	66.0	71.0	62.0	265000.0
Q3:75%	161.5	75.7	73.0	72.0	83.5	66.255	300000.0
Q4:100%	215.0	89.4	97.7	91.0	98.0	77.89	940000.0
99%	212.86	87.0	91.86	83.86	97.0	76.1142	NaN

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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