ASSIGNMENT-2
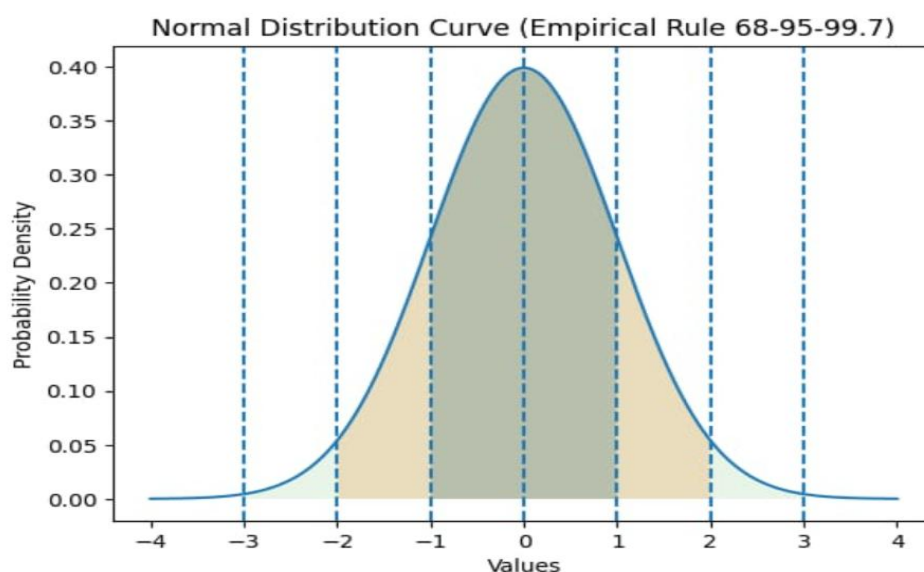
Take one Domain and draw the graph (Normal distribution) (Empirical rule)

Domain: Students' Exam Marks

Assume:

Mean (μ) = 50

Standard Deviation (σ) = 10

The graph shows one normal distribution curve, which represents this domain.

Empirical Rule (From the Graph)

> ➢ 68% of students score between 40 and 60 ($\mu \pm 1\sigma$)
> ➢ 95% of students score between 30 and 70 ($\mu \pm 2\sigma$)
> ➢ 99.7% of students score between 20 and 80 ($\mu \pm 3\sigma$)

Conclusion:

The given graph represents a normal distribution for one domain (students' marks). According to the Empirical Rule:

68% of data lies within one standard deviation,

95% lies within two standard deviations,

99.7% lies within three standard deviations.

Thus, the graph correctly shows the normal distribution and the Empirical Rule for a single domain.