**Task 3**

**Summary of Probability And Statistics (Mean, Median and Mode) Lecture:**

Probability quantifies how likely an event is, ranging from 0 to 1. Random variables represent outcomes, with discrete variables having countable outcomes (e.g., rolling dice) and continuous variables having a range (e.g., bus arrival times). Probability distributions describe these variables, with discrete ones like the uniform distribution and continuous ones like the normal distribution. Key statistics include mean, variance, and standard deviation. Real-world data, like baseball player statistics, can be analyzed to identify trends and correlations, using concepts like the normal distribution, confidence intervals, hypothesis testing, and central limit theorem. Covariance and correlation measure relationships between variables, aiding in understanding dependencies.