**1. What effect did diversification have?**

Diversification significantly reduced portfolio risk without proportionally reducing returns. By combining assets with imperfect correlation, the overall portfolio volatility decreased compared to the individual asset risks. This was evident when mixed-asset portfolios (e.g., combining ICICIBANK, INFY, and RELIANCE) showed lower standard deviation values than single-asset portfolios. Diversification allowed us to access the benefit of risk-spreading, demonstrating the core principle of Modern Portfolio Theory.

**2. How did changes in weights affect risk and return?**

Changes in weights led to clear trade-offs between risk and return. Portfolios heavily weighted toward higher-return stocks like RELIANCE yielded higher returns but also came with higher standard deviations. Conversely, portfolios with more balanced or conservative weights achieved lower risk but also moderated returns. The variation in Sharpe Ratios across portfolios highlights how crucial the weight distribution is in achieving an optimal balance of return per unit of risk.

**3. Which portfolio would you recommend and why?**

The recommended portfolio is the one with the **highest Sharpe Ratio**, also known as the **Tangency Portfolio**. It offers the best risk-adjusted return, meaning investors are getting the maximum return per unit of risk taken. Based on the computed values, this portfolio lies on the Capital Market Line, making it optimal for combining with a risk-free asset depending on the investor’s risk tolerance. This approach ensures that the portfolio aligns with both return expectations and acceptable risk levels.