1. Summary of Key Lessons and Concepts

In Part 1, I learned about the fundamental concepts that form the backbone of how computer systems function. Some of the key topics included **the role and purpose of operating systems, process management, memory management, and file systems**. I also gained a deeper understanding of how the operating system acts as an intermediary between hardware and users, managing resources efficiently and ensuring system stability.

A particularly valuable lesson was learning how **process scheduling and concurrency** work. I now understand how the CPU handles multiple processes at once and how scheduling algorithms like Round Robin and First-Come-First-Serve affect performance. I also found memory management concepts such as paging and segmentation challenging at first, but after more study and practice, I appreciated their importance in preventing memory errors and optimizing performance.

Another key takeaway was the **importance of system security and user management**, especially in multi-user environments. Understanding file permissions, access control, and system protection helped me see how vital the operating system is in maintaining privacy and security.

2. How These Lessons Will Impact My Work in Part 2

The knowledge gained in Part 1 will strongly influence how I approach Part 2. I now have a better foundation for analyzing more advanced topics like device management, virtualization, and system performance. I also plan to apply a more practical approach by connecting theoretical concepts to real-world examples — for instance, relating process management to how applications run on Windows or Linux.

Learning how operating systems manage hardware and software resources has also helped me think more critically about **system efficiency and problem-solving**. This understanding will guide me in assignments that require designing, comparing, or evaluating operating system components.

3. Strategies and Actions for Part 2

Based on my experiences in Part 1, I plan to make several changes to improve my performance in Part 2:

- **Active learning:** Instead of only reading the textbook, I will use simulation tools or virtual machines to experiment with operating system commands and configurations, especially Linux.
- **Better time management:** I will create a weekly study plan to review each topic regularly instead of rushing before deadlines.
- **Collaborative learning:** I will participate more in discussion forums or study groups to exchange ideas and clarify difficult concepts.
- **Note-taking strategy:** I will summarize complex topics in my own words and create visual aids like diagrams for process scheduling and memory management.
- **Practical connection:** I will relate each theoretical concept to real-life applications (e.g., how Windows task manager shows processes, or how file systems organize data).

Conclusion

Part 1 of this module has given me a strong understanding of the core principles of operating systems and highlighted areas where I can improve. In Part 2, I will apply a more active, practical, and organized learning approach to strengthen my understanding and achieve better results.