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COURSE: OPERATING SYSTEM

Assignment 3:

Memory Management Simulation

Total Marks: 10 CLOs Covered: CLO-3

Tasks:

• Implement memory management techniques such as paging, segmentation,

and virtual memory.

• Simulate various memory allocation strategies, including First Fit, Best Fit,

and Worst Fit.

• Develop a virtual memory management system that simulates page faults and

implements page replacement algorithms like FIFO (First In, First Out),

LRU (Least Recently Used), and OPT (Optimal).

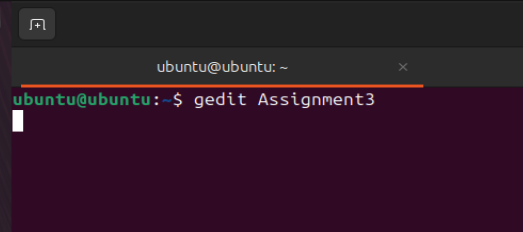
• Allow memory to be dynamically allocated as processes are created and terminated,

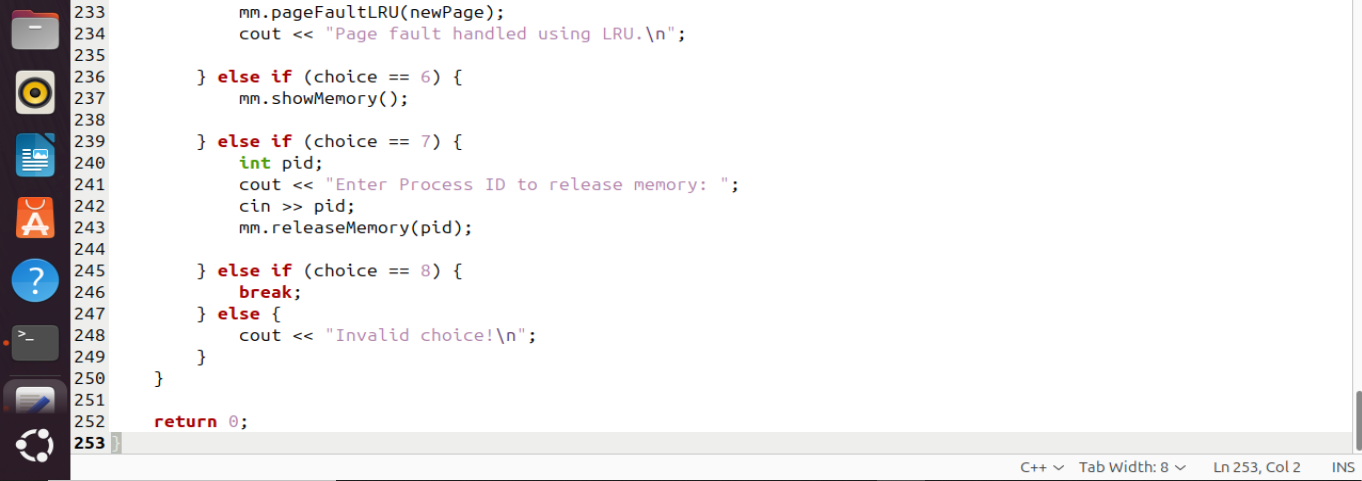
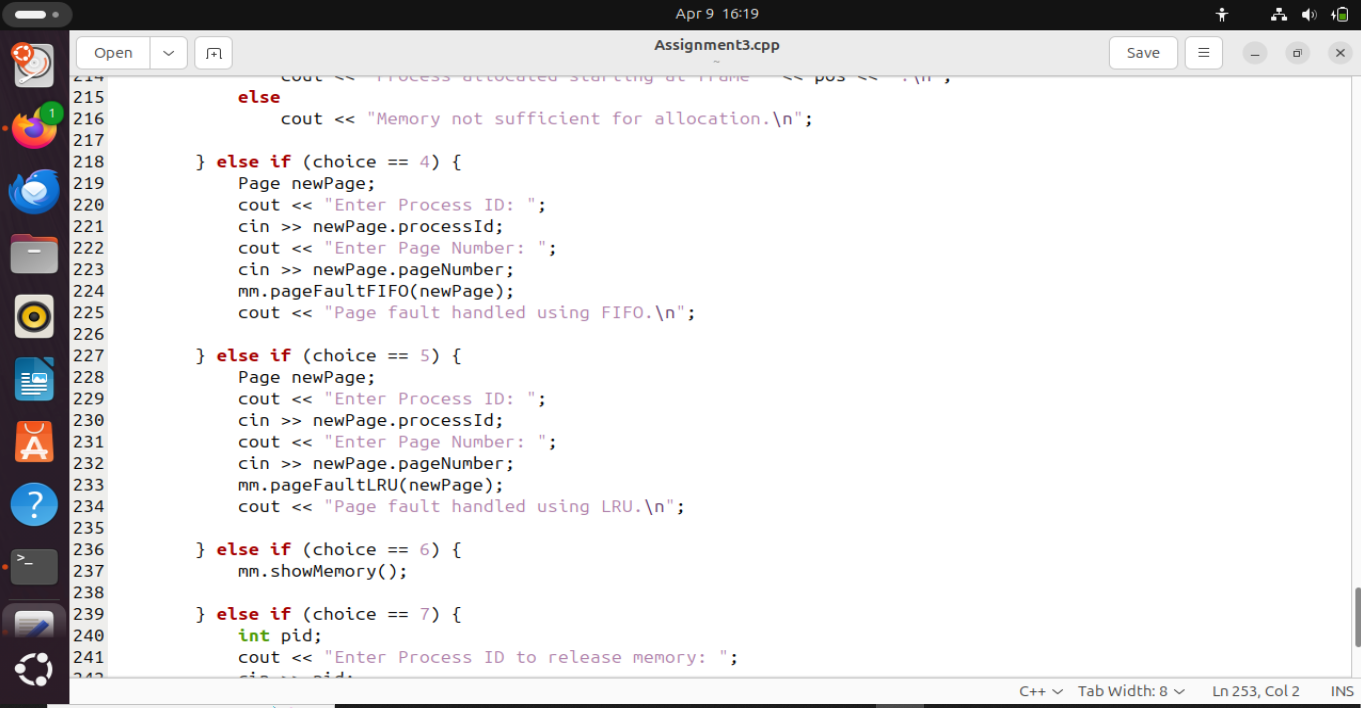
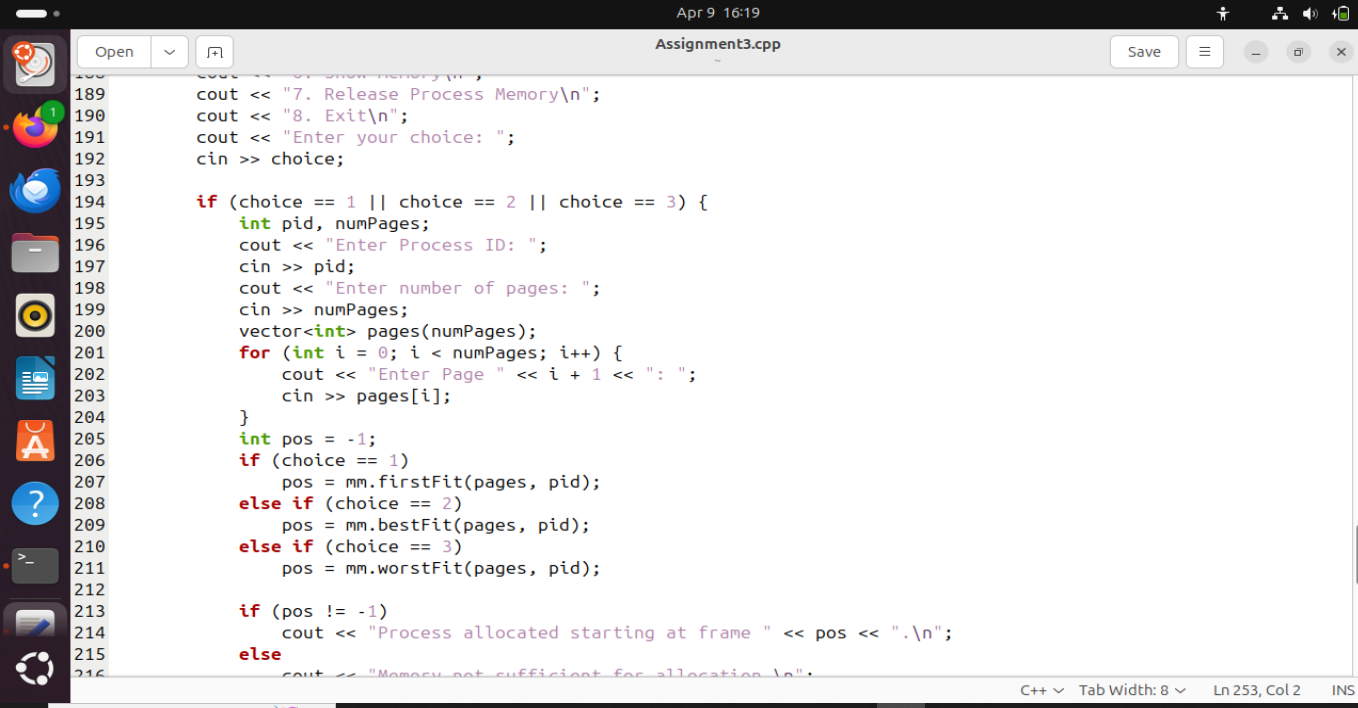
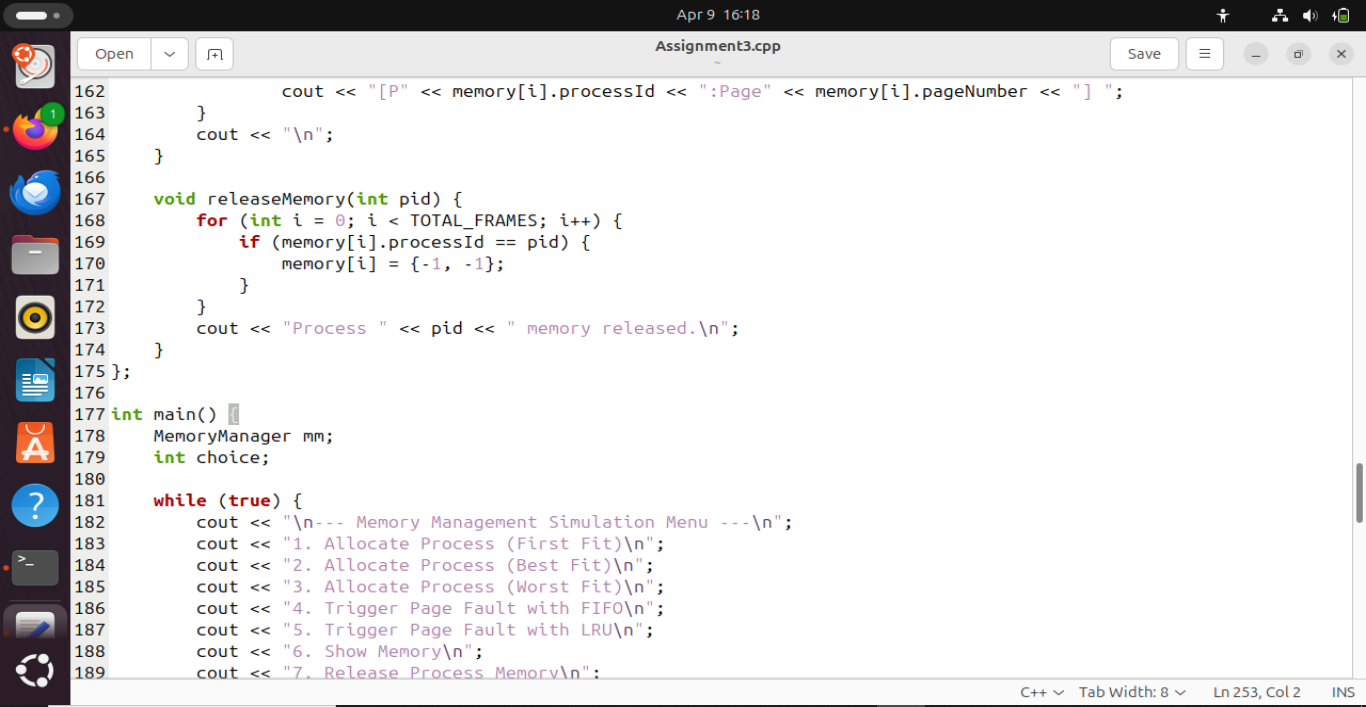
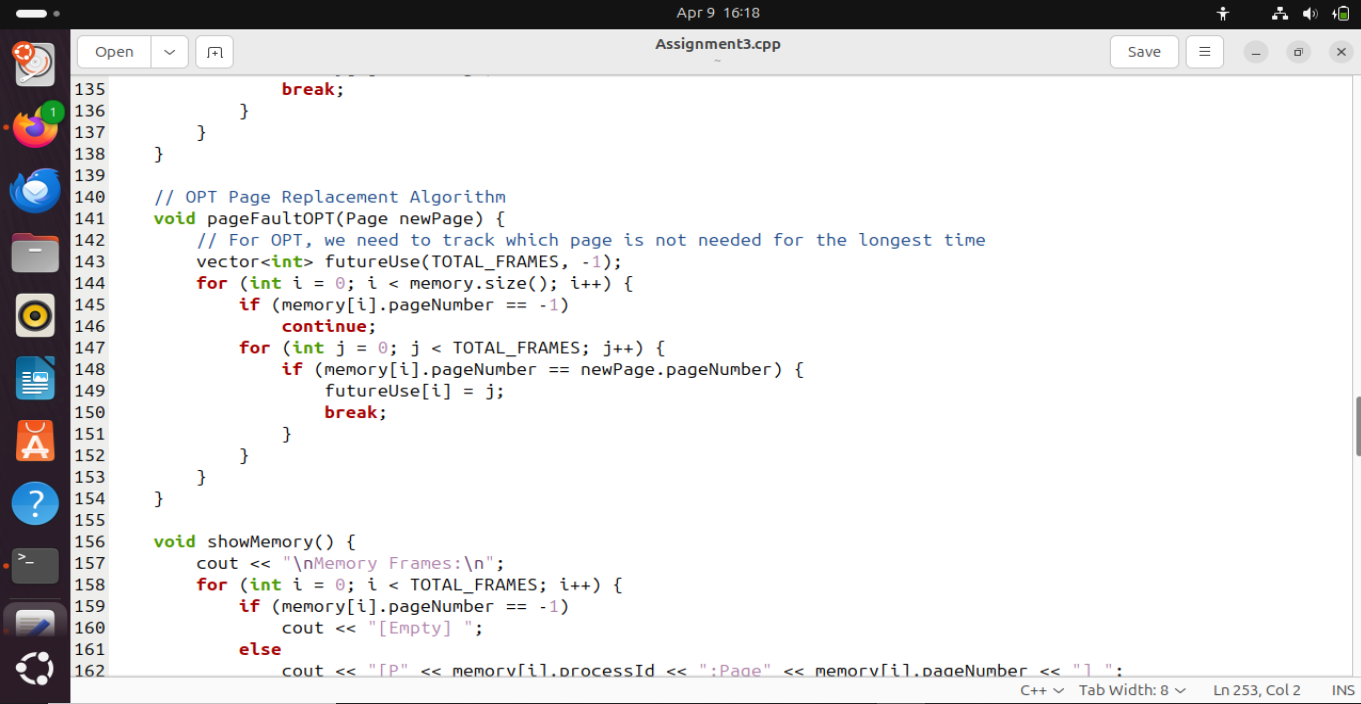
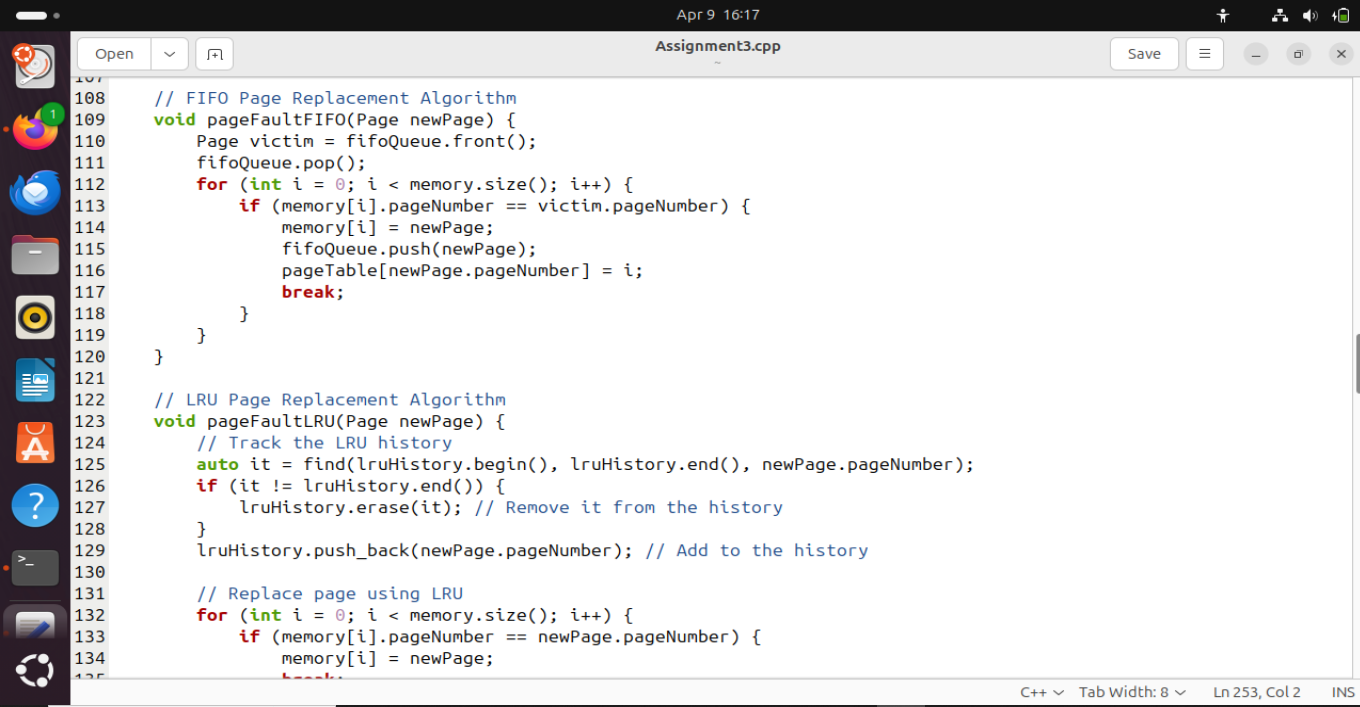
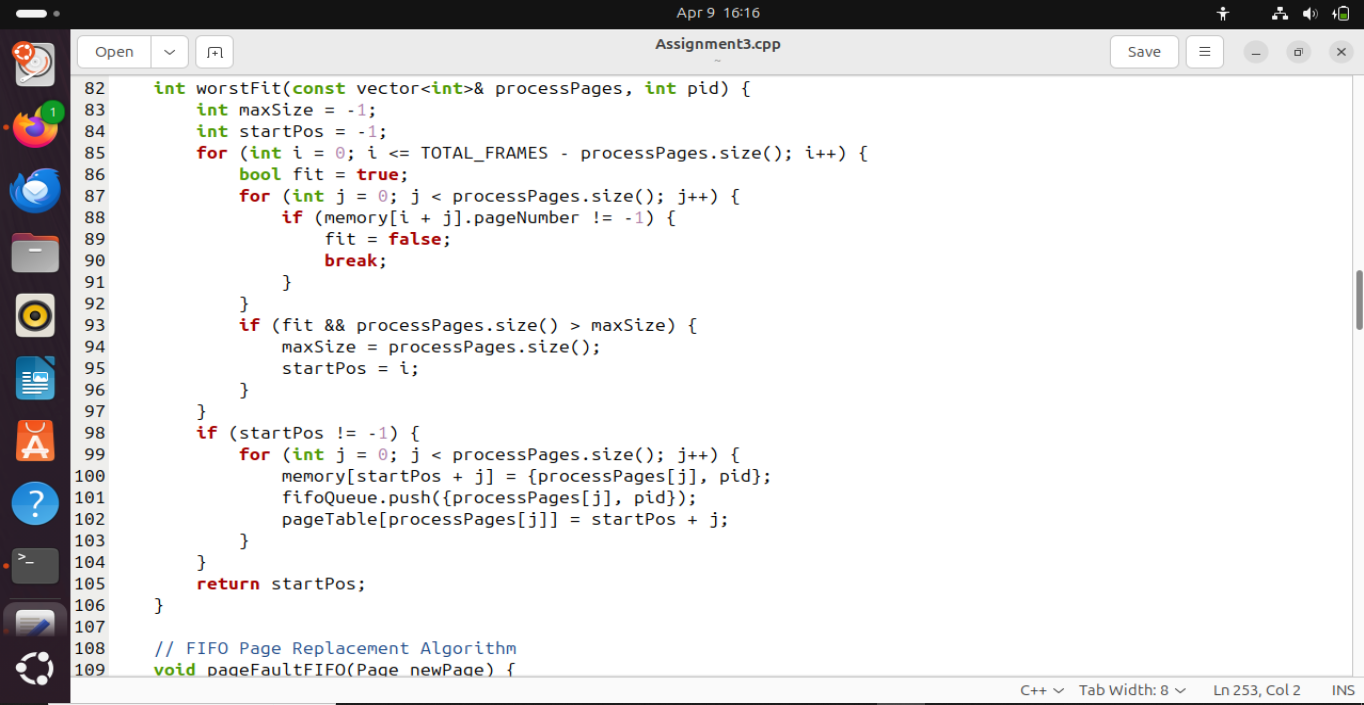
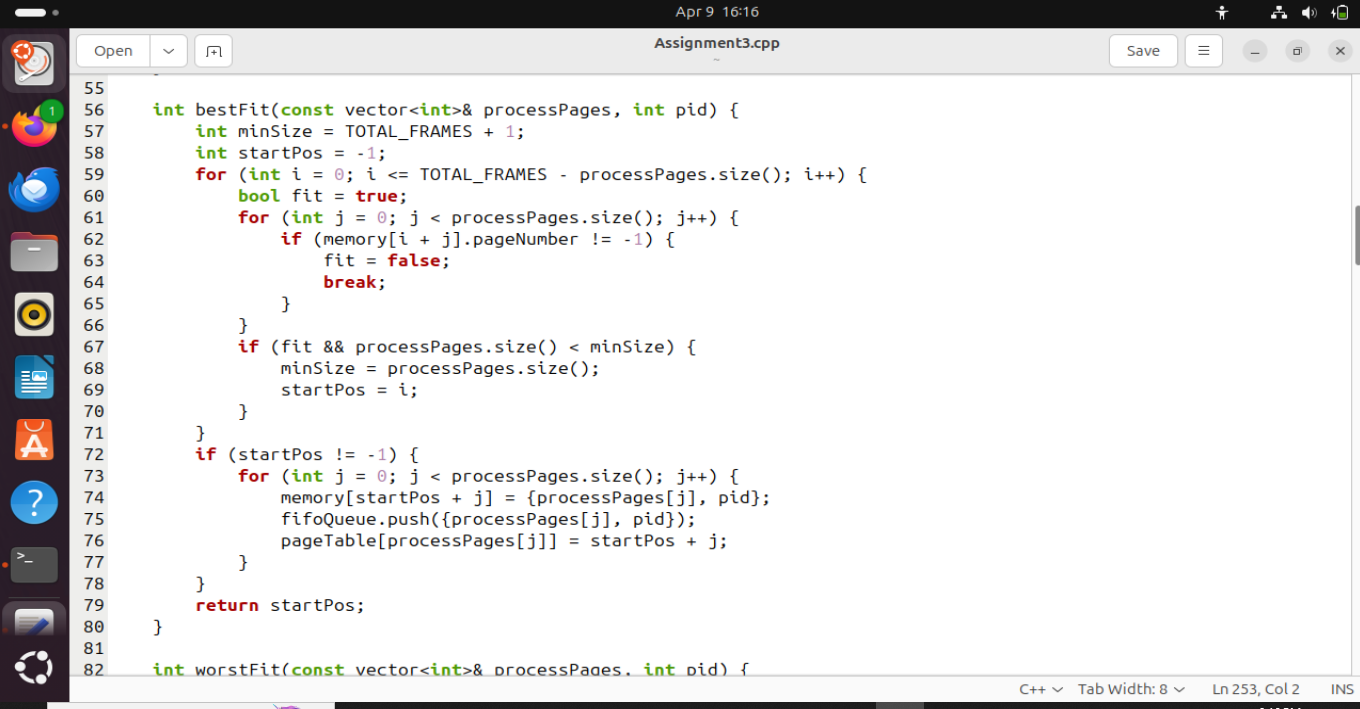
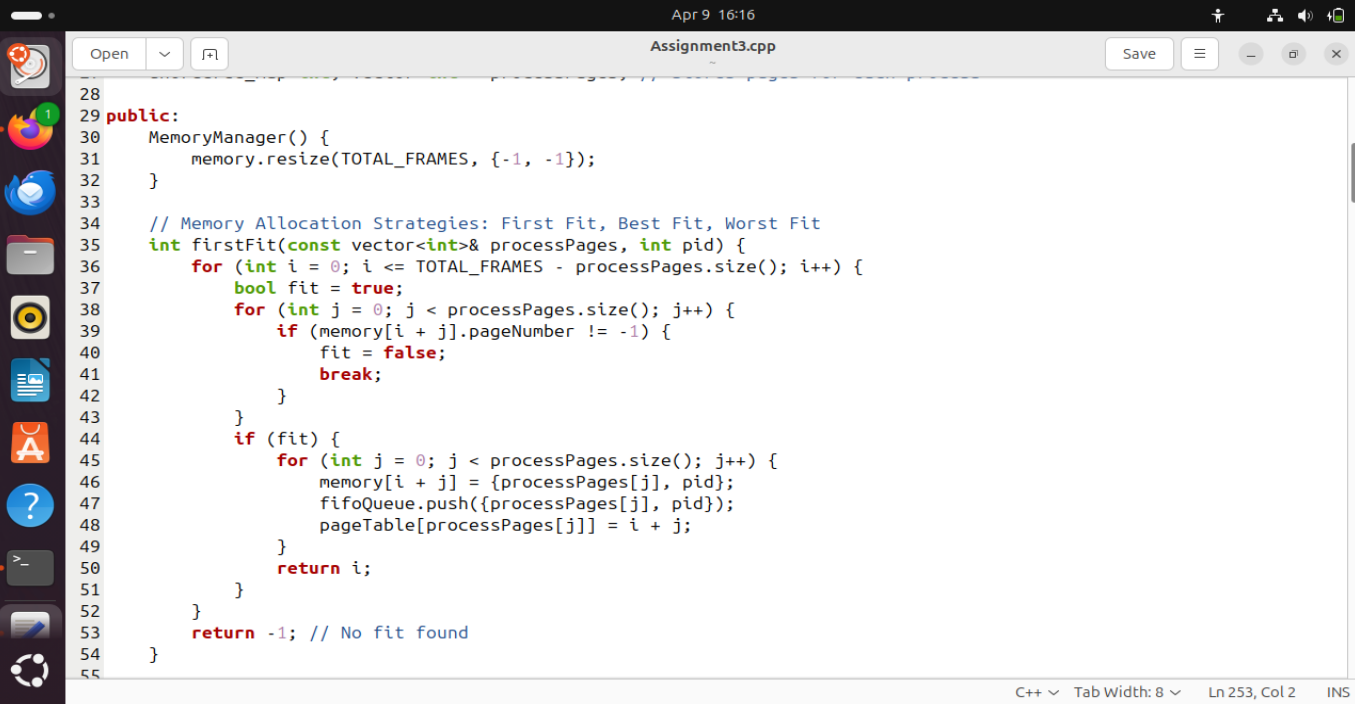
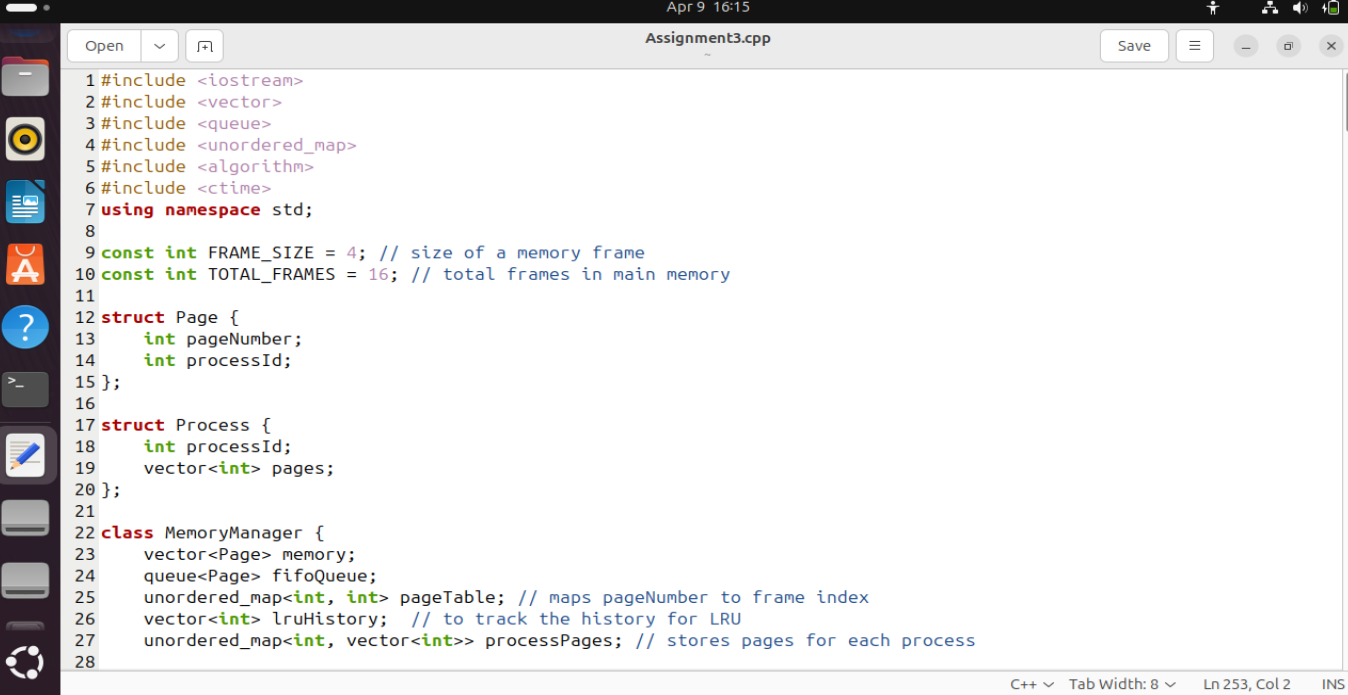
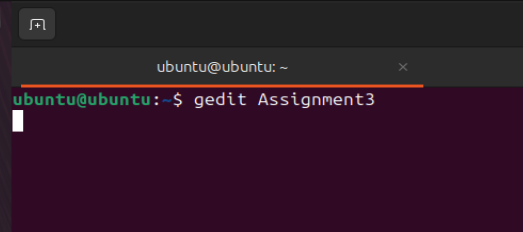
and handle situations where processes may have to wait for memory allocation.

• Include memory fragmentation and optimize memory usage for the processes in the

system.

CODE:





OUTPUT:

